

# ALMANAC CCXXXI PERIGEEES OF JUPITER IN CE

The almanac CCXXXI contains a list of perigees of Jupiter from the 1st millennium CE to the 3rd millennium CE.

## 1ST MILLENNIUM CE

This is a list of perigees of Jupiter in the 1st millennium CE.

DATA	TDT	DiSTANCE
		min
		km

0/02/27 05:12:58 664.153159

1/03/29 18:31:27 660.115871  
2/05/01 03:26:23 646.524256  
3/06/03 21:03:22 627.047005  
4/07/08 03:07:29 607.632692  
5/08/13 14:38:23 595.232657  
6/09/19 07:01:47 594.759077  
7/10/25 06:13:06 606.381980  
8/11/27 15:21:51 625.407901  
9/12/30 12:52:39 645.013503  
11/01/31 06:00:43 659.196706  
12/03/02 15:01:08 664.100836  
13/04/03 05:02:01 658.486037  
14/05/05 19:10:15 643.809270  
15/06/08 17:27:56 624.089797  
16/07/13 05:19:23 605.554350  
17/08/18 16:45:42 594.848363  
18/09/24 09:08:19 596.205684  
19/10/30 01:31:24 609.028266  
20/12/02 06:13:16 628.226798  
22/01/03 22:11:44 647.143861  
23/02/04 15:15:03 660.074049  
24/03/06 22:37:17 663.589219  
25/04/07 17:20:40 656.784174  
26/05/10 09:57:20 641.361038  
27/06/13 14:39:45 621.582629  
28/07/18 04:31:37 603.746668  
29/08/23 19:40:46 594.400289  
30/09/29 08:36:56 597.295160  
31/11/03 21:34:37 611.170800  
32/12/06 21:17:37 630.639950

34/01/08 10:07:49 649.047720  
35/02/09 00:11:41 661.085390  
36/03/11 09:29:27 663.575681  
37/04/12 03:41:03 655.827581  
38/05/15 01:12:38 639.703558  
39/06/18 07:11:58 619.661109  
40/07/23 02:14:41 602.180178  
41/08/28 17:01:05 593.804387  
42/10/04 05:41:37 597.919598  
43/11/08 15:53:02 612.837635  
44/12/11 10:56:32 632.756002  
46/01/12 21:05:28 650.968793  
47/02/13 09:43:01 662.125321  
48/03/15 18:03:05 663.318962  
49/04/16 16:27:04 654.192327  
50/05/19 16:07:15 637.073795  
51/06/23 05:18:46 616.798244  
52/07/28 03:07:23 600.108850  
53/09/02 20:26:12 593.358665  
54/10/09 07:14:58 599.424081  
55/11/13 10:47:46 615.758071  
56/12/16 01:29:45 636.051179  
58/01/17 05:31:13 653.523263  
59/02/17 16:32:41 663.204574  
60/03/20 01:55:47 662.557176  
61/04/21 02:35:30 651.767349  
62/05/24 09:20:13 633.610965  
63/06/28 03:36:14 613.419774  
64/08/02 07:05:13 598.043783  
65/09/08 01:51:24 593.471929

66/10/14 07:50:37 601.537589  
67/11/18 07:26:57 618.912638  
68/12/20 14:11:55 639.094069  
70/01/21 16:16:18 655.569312  
71/02/22 00:38:48 663.713967  
72/03/24 11:56:48 661.450864  
73/04/25 16:30:49 649.322256  
74/05/29 03:57:59 630.592110  
75/07/03 03:45:07 610.867709  
76/08/07 10:49:34 597.011213  
77/09/13 03:20:19 594.346492  
78/10/19 06:49:29 603.921874  
79/11/22 22:25:58 621.849328  
80/12/25 02:18:25 641.574711  
82/01/25 23:33:23 656.910093  
83/02/26 09:36:07 663.641470  
84/03/28 21:36:46 660.037827  
85/04/30 06:52:19 647.003459  
86/06/02 22:27:41 627.987293  
87/07/08 03:33:14 608.781961  
88/08/12 11:28:13 596.134820  
89/09/18 05:06:57 595.031135  
90/10/24 03:04:25 605.876833  
91/11/27 15:26:45 624.285503  
92/12/29 13:42:28 643.697978  
94/01/30 10:28:03 658.149582  
95/03/02 18:07:10 663.813665  
96/04/02 09:22:31 659.228045  
97/05/04 19:35:54 645.439647  
98/06/07 16:10:18 626.102276

99/07/12 22:37:42 607.133570  
100/08/17 10:25:04 595.341106  
101/09/23 01:42:54 595.428751  
102/10/28 21:59:32 607.321899  
103/12/02 05:50:27 626.319299  
105/01/03 01:22:53 645.651687  
106/02/03 18:49:36 659.448076  
107/03/07 03:55:05 663.957659  
108/04/06 18:52:39 658.026779  
109/05/09 10:53:12 643.105961  
110/06/12 10:08:18 623.261648  
111/07/17 23:37:02 604.727651  
112/08/22 12:15:27 594.302879  
113/09/28 03:42:10 596.241110  
114/11/02 19:35:10 609.808047  
115/12/06 21:08:42 629.562970  
117/01/07 11:39:42 648.584386  
118/02/08 02:12:37 661.138613  
119/03/11 09:41:29 663.921444  
120/04/11 04:50:55 656.191370  
121/05/13 23:32:44 639.936786  
122/06/17 07:26:56 619.682638  
123/07/23 00:50:14 602.009221  
124/08/27 17:21:46 593.518289  
125/10/03 07:10:02 597.684480  
126/11/07 16:42:21 612.705531  
127/12/11 13:29:33 632.775093  
129/01/11 22:06:36 651.056011  
130/02/12 11:02:35 662.232940  
131/03/15 19:18:00 663.354005

132/04/15 16:15:52 654.149922  
133/05/18 17:33:08 636.973981  
134/06/22 05:10:04 616.814218  
135/07/28 03:47:36 600.334848  
136/09/01 21:00:27 593.762108  
137/10/08 06:04:34 599.682995  
138/11/12 11:41:59 615.634095  
139/12/16 01:01:48 635.550108  
141/01/16 07:51:20 652.858368  
142/02/16 18:21:01 662.620315  
143/03/20 04:39:33 662.324108  
144/04/20 05:16:58 651.993954  
145/05/23 10:23:22 634.345465  
146/06/27 03:31:13 614.454946  
147/08/02 05:27:06 599.050041  
148/09/06 21:34:35 594.010651  
149/10/13 05:33:22 601.367033  
150/11/17 04:16:41 618.065231  
151/12/20 15:04:02 637.862552  
153/01/20 17:03:02 654.374612  
154/02/21 04:37:58 663.024621  
155/03/24 14:29:42 661.640866  
156/04/24 18:23:38 650.512914  
157/05/28 02:37:28 632.438062  
158/07/01 23:31:06 612.717959  
159/08/07 02:26:14 598.057950  
160/09/11 20:30:05 594.171404  
161/10/17 23:54:14 602.640652  
162/11/21 20:32:14 620.004819  
163/12/25 02:06:01 639.869937

165/01/25 03:23:29 655.849186  
166/02/25 12:03:54 663.512924  
167/03/29 01:07:56 660.861482  
168/04/29 06:29:46 648.510288  
169/06/01 20:32:29 629.732208  
170/07/06 20:56:42 610.117181  
171/08/12 05:22:45 596.528736  
172/09/16 21:43:31 594.364719  
173/10/22 23:26:31 604.565539  
174/11/26 13:40:18 623.051564  
175/12/29 14:22:39 642.985060  
177/01/29 10:23:17 658.081402  
178/03/01 19:22:11 664.166054  
179/04/02 07:29:24 659.702631  
180/05/03 18:56:37 645.784338  
181/06/06 12:58:28 626.164697  
182/07/11 21:46:31 606.897505  
183/08/17 08:23:49 594.904108  
184/09/22 02:17:36 594.972488  
185/10/27 23:19:31 607.051232  
186/12/01 07:18:07 626.270869  
188/01/03 02:53:53 645.823606  
189/02/02 20:07:41 659.693174  
190/03/06 03:20:40 664.190417  
191/04/06 19:38:27 658.123427  
192/05/08 09:13:09 643.036813  
193/06/11 10:54:31 623.104703  
194/07/16 22:36:24 604.671792  
195/08/22 12:44:12 594.433412  
196/09/27 03:59:58 596.473949

197/11/01 19:03:29 609.829804  
198/12/05 22:20:17 629.273133  
200/01/07 12:17:45 648.052220  
201/02/07 04:10:31 660.594929  
202/03/10 12:33:11 663.563424  
203/04/11 06:21:06 656.227096  
204/05/13 02:12:09 640.408489  
205/06/16 07:02:41 620.540999  
206/07/22 00:00:40 602.971086  
207/08/27 14:53:43 594.235965  
208/10/02 03:08:28 597.813814  
209/11/06 15:07:25 612.181048  
210/12/10 11:32:53 631.753322  
212/01/11 23:53:55 649.887270  
213/02/11 12:59:53 661.295262  
214/03/14 22:27:44 663.097350  
215/04/15 19:04:51 654.802695  
216/05/17 17:22:31 638.482737  
217/06/21 02:45:14 618.653742  
218/07/26 22:08:31 601.776687  
219/09/01 12:45:10 594.152921  
220/10/07 00:29:07 598.912834  
221/11/11 06:39:42 614.059250  
222/12/15 01:17:40 633.798052  
224/01/16 08:38:09 651.514921  
225/02/15 22:24:09 662.065119  
226/03/19 07:11:03 662.678337  
227/04/20 06:49:03 653.173156  
228/05/22 09:08:12 635.950336  
229/06/25 23:38:49 615.972047



230/07/31 22:15:15 599.844896  
231/09/06 16:05:39 593.769318  
232/10/11 23:47:57 600.278333  
233/11/16 02:57:14 616.750647  
234/12/19 14:05:07 636.960002  
236/01/20 18:46:13 654.132900  
237/02/20 03:52:37 663.357242  
238/03/23 14:38:17 662.242236  
239/04/24 15:49:04 651.019191  
240/05/27 00:31:10 632.633928  
241/06/30 20:04:52 612.486306  
242/08/06 01:52:21 597.488892  
243/09/11 19:27:14 593.493693  
244/10/17 02:05:21 602.122103  
245/11/20 22:34:36 619.830134  
246/12/24 05:03:13 640.019385  
248/01/25 04:19:14 656.236912  
249/02/24 13:56:23 663.940415  
250/03/27 23:58:02 661.172408  
251/04/29 06:47:18 648.584906  
252/05/31 18:51:09 629.534362  
253/07/05 21:53:12 609.813308  
254/08/11 04:44:52 596.338399  
255/09/16 23:17:04 594.366245  
256/10/22 00:39:50 604.632241  
257/11/25 15:05:45 622.919599  
258/12/28 16:17:54 642.654538  
260/01/29 13:15:50 657.631151  
261/02/28 21:25:20 663.804505  
262/04/01 11:36:09 659.590939

263/05/03 20:30:42 646.038558  
264/06/05 15:56:08 626.782420  
265/07/10 21:14:22 607.740080  
266/08/16 08:05:42 595.652832  
267/09/22 00:29:43 595.338339  
268/10/26 21:06:50 606.829647  
269/11/30 07:20:48 625.538923  
271/01/02 03:28:49 644.789579  
272/02/02 22:45:19 658.716734  
273/03/05 07:31:23 663.604649  
274/04/05 22:27:35 658.305655  
275/05/08 12:32:08 644.075020  
276/06/10 09:48:04 624.746720  
277/07/15 20:04:56 606.262783  
278/08/21 07:15:28 595.295768  
279/09/26 21:40:39 596.222463  
280/10/31 16:04:27 608.648595  
281/12/04 20:17:49 627.647730  
283/01/06 14:45:56 646.590692  
284/02/07 07:04:59 659.715788  
285/03/09 16:23:51 663.527220  
286/04/10 09:40:58 657.009354  
287/05/13 02:22:24 641.796041  
288/06/15 05:38:46 622.046272  
289/07/20 19:36:46 604.052368  
290/08/26 08:57:11 594.385854  
291/10/01 23:53:14 597.023285  
292/11/05 12:08:19 610.908959  
293/12/09 13:00:09 630.677590  
295/01/11 00:30:02 649.445979

296/02/11 15:20:51 661.551289  
297/03/13 22:27:40 663.770757  
298/04/14 18:07:14 655.530585  
299/05/17 15:12:13 638.877317  
300/06/20 00:18:18 618.554049  
301/07/25 19:49:35 601.155258  
302/08/31 13:54:14 593.262281  
303/10/07 01:46:55 598.108245  
304/11/10 11:27:58 613.625591  
305/12/14 04:39:30 633.843344  
307/01/15 13:19:59 651.943480  
308/02/15 23:50:37 662.680219  
309/03/18 09:14:29 663.253742  
310/04/19 06:25:28 653.484060  
311/05/22 09:25:44 635.892218  
312/06/24 23:14:06 615.563208  
313/07/31 00:28:43 599.362715  
314/09/05 17:16:19 593.457230  
315/10/12 03:35:28 600.186392  
316/11/15 05:48:55 616.714358  
317/12/18 18:20:23 636.782465  
319/01/19 21:52:11 653.849428  
320/02/20 09:08:32 663.053112  
321/03/22 18:01:13 662.071580  
322/04/23 21:02:29 651.114651  
323/05/27 03:16:23 633.026285  
324/06/29 23:53:16 613.137920  
325/08/05 02:16:35 598.193620  
326/09/10 20:42:41 593.962251  
327/10/17 02:09:56 602.170191

328/11/19 23:32:11 619.373983  
329/12/23 07:07:02 639.224022  
331/01/24 08:14:21 655.317740  
332/02/24 17:43:33 663.224507  
333/03/27 06:09:35 660.975154  
334/04/28 10:09:03 649.161783  
335/05/31 22:42:05 630.825490  
336/07/04 20:53:08 611.377777  
337/08/10 03:06:31 597.488585  
338/09/15 19:27:21 594.604434  
339/10/21 21:32:11 603.872424  
340/11/24 15:06:21 621.555491  
341/12/27 18:01:49 641.187998  
343/01/28 17:27:00 656.575675  
344/02/29 03:01:58 663.424974  
345/03/31 15:32:59 660.021045  
346/05/03 00:44:40 647.130012  
347/06/05 15:40:28 628.196997  
348/07/09 20:22:21 608.945802  
349/08/15 04:41:04 596.155423  
350/09/20 21:13:20 594.875107  
351/10/26 21:05:46 605.702758  
352/11/29 08:00:56 624.348190  
354/01/01 07:26:46 644.134314  
355/02/02 01:40:48 658.796683  
356/03/04 09:55:48 664.301483  
357/04/04 23:46:05 659.199847  
358/05/07 10:57:55 644.760475  
359/06/10 08:48:00 624.865513  
360/07/14 18:38:47 605.744971

361/08/20 07:28:13 594.277905  
362/09/26 01:45:29 595.131257  
363/10/31 20:20:49 607.887905  
364/12/04 03:40:57 627.450156  
366/01/05 19:51:55 646.942827  
367/02/06 12:52:55 660.442007  
368/03/08 19:18:56 664.328925  
369/04/09 11:39:22 657.639652  
370/05/12 03:35:26 641.988472  
371/06/15 06:35:12 621.747659  
372/07/19 21:14:57 603.399977  
373/08/25 13:24:48 593.758169  
374/10/01 03:44:06 596.663522  
375/11/05 18:50:24 610.803652  
376/12/08 18:06:43 630.622473  
378/01/10 07:36:02 649.311610  
379/02/10 20:22:06 661.363809  
380/03/13 05:25:15 663.623365  
381/04/13 23:41:43 655.516617  
382/05/16 21:16:45 639.107348  
383/06/20 04:52:55 618.994223  
384/07/25 00:58:32 601.738543  
385/08/30 16:01:56 593.763062  
386/10/06 05:27:36 598.312180  
387/11/10 13:51:31 613.443970  
388/12/13 09:03:25 633.281487  
390/01/14 17:21:54 651.192547  
391/02/15 06:49:18 661.948487  
392/03/17 14:52:25 662.825394  
393/04/18 13:59:44 653.660977

394/05/21 14:06:01 636.771886  
395/06/25 03:35:36 616.934141  
396/07/30 00:16:32 600.651892  
397/09/04 17:22:03 594.060942  
398/10/11 02:22:26 599.875046  
399/11/15 06:46:49 615.652942  
400/12/17 21:24:22 635.448427  
402/01/19 03:38:52 652.688980  
403/02/19 14:50:32 662.449285  
404/03/22 01:50:53 662.170573  
405/04/23 01:39:32 651.903118  
406/05/26 08:04:44 634.262786  
407/06/30 00:09:09 614.378828  
408/08/04 02:51:09 598.926000  
409/09/09 19:30:40 593.850208  
410/10/16 02:33:10 601.248898  
411/11/20 02:49:41 618.172789  
412/12/22 11:29:36 638.343680  
414/01/23 13:45:20 655.189032  
415/02/23 23:04:51 663.817375  
416/03/26 08:30:21 662.002059  
417/04/27 12:29:38 650.127175  
418/05/30 21:25:28 631.294785  
419/07/04 21:27:46 611.088496  
420/08/09 03:46:06 596.523388  
421/09/14 23:04:04 593.295619  
422/10/21 04:53:22 602.770149  
423/11/24 22:39:05 621.016694  
424/12/27 03:33:19 641.338511  
426/01/28 00:48:10 657.265822

427/02/28 09:03:28 664.410194  
428/03/30 20:15:50 660.928158  
429/05/02 02:42:45 647.679923  
430/06/04 18:33:12 628.143988  
431/07/09 22:47:05 608.339011  
432/08/14 09:01:27 595.287697  
433/09/20 04:26:08 594.188823  
434/10/26 03:50:28 605.380998  
435/11/29 17:22:57 624.286029  
436/12/31 14:47:40 644.111006  
438/02/01 10:43:53 658.743829  
439/03/04 17:33:49 664.214895  
440/04/04 07:42:48 659.180096  
441/05/06 18:59:47 644.862295  
442/06/09 15:51:58 625.158014  
443/07/15 01:05:19 606.163765  
444/08/19 14:09:09 594.738877  
445/09/25 06:05:37 595.425249  
446/10/31 02:47:01 607.889749  
447/12/04 08:35:00 627.136617  
449/01/05 03:33:24 646.377057  
450/02/05 19:21:02 659.792840  
451/03/09 04:22:56 663.818795  
452/04/08 19:46:06 657.508800  
453/05/11 11:57:32 642.491330  
454/06/14 12:42:15 622.813782  
455/07/20 02:26:00 604.673430  
456/08/24 14:41:17 594.627188  
457/09/30 06:17:49 596.726540  
458/11/04 20:39:30 610.096832

459/12/08 23:13:44 629.459579  
461/01/09 13:14:55 648.160215  
462/02/10 05:21:30 660.591497  
463/03/13 12:55:25 663.461842  
464/04/13 08:38:36 656.027690  
465/05/16 02:59:02 640.133905  
466/06/19 10:07:56 620.205129  
467/07/25 02:14:24 602.639455  
468/08/29 18:29:35 593.943904  
469/10/05 07:06:31 597.673845  
470/11/09 18:20:13 612.288338  
471/12/13 15:13:35 632.246912  
473/01/14 01:25:25 650.774671  
474/02/14 13:21:02 662.360629  
475/03/17 21:49:10 663.856199  
476/04/17 16:41:15 654.866733  
477/05/20 16:55:46 637.629335  
478/06/24 03:14:58 617.033032  
479/07/30 02:59:28 599.888692  
480/09/03 20:57:26 592.715674  
481/10/10 09:37:57 598.455456  
482/11/14 16:57:40 614.727271  
483/12/18 08:00:38 635.246450  
485/01/18 14:11:06 653.219511  
486/02/19 00:15:18 663.452275  
487/03/22 07:48:01 663.320361  
488/04/22 07:34:33 652.801839  
489/05/25 10:29:35 634.601521  
490/06/29 04:43:16 613.994935  
491/08/04 07:12:49 598.027498



492/09/09 02:40:18 592.872842  
493/10/15 12:22:22 600.621616  
494/11/19 12:16:56 617.950849  
495/12/22 22:46:51 638.352616  
497/01/22 23:40:15 655.217697  
498/02/23 09:08:41 663.838414  
499/03/26 18:48:05 661.998080  
500/04/26 21:19:37 650.192515  
501/05/30 07:32:59 631.459825  
502/07/04 05:42:18 611.387988  
503/08/09 12:05:42 596.879324  
504/09/14 07:37:01 593.615560  
505/10/20 11:34:56 602.890268  
506/11/24 07:34:05 620.887725  
507/12/27 10:58:04 640.960315  
509/01/27 10:40:38 656.746517  
510/02/27 18:15:04 663.888474  
511/03/31 06:25:08 660.641040  
512/05/01 13:09:58 647.840688  
513/06/04 03:22:04 628.907260  
514/07/09 06:05:33 609.464817  
515/08/14 15:01:27 596.312574  
516/09/19 07:28:13 594.588072  
517/10/25 09:15:16 605.008315  
518/11/28 22:11:28 623.362338  
519/12/31 23:27:07 643.016616  
521/01/31 18:52:44 657.875826  
522/03/04 04:25:38 663.856845  
523/04/04 17:09:24 659.427414  
524/05/06 04:07:06 645.692717

525/06/08 22:33:11 626.281757  
526/07/14 06:40:22 607.185022  
527/08/19 16:43:18 595.188517  
528/09/24 10:52:47 595.071087  
529/10/30 07:22:04 606.892344  
530/12/03 16:50:19 625.981427  
532/01/05 11:55:02 645.680265  
533/02/05 05:53:30 659.897867  
534/03/08 11:44:24 664.712614  
535/04/09 02:59:13 658.838444  
536/05/10 15:09:09 643.689160  
537/06/13 15:39:55 623.380440  
538/07/19 03:27:00 604.288489  
539/08/24 19:47:09 593.403529  
540/09/29 12:47:53 595.152269  
541/11/04 07:20:30 608.767526  
542/12/08 11:20:06 628.850462  
544/01/10 02:19:06 648.355872  
545/02/09 16:06:10 661.484370  
546/03/12 23:27:33 664.710772  
547/04/13 14:40:36 657.230525  
548/05/15 09:16:27 640.895845  
549/06/18 13:26:42 620.219675  
550/07/24 08:32:37 601.901373  
551/08/30 01:08:16 592.849877  
552/10/04 16:58:53 596.719185  
553/11/09 06:00:51 611.810597  
554/12/13 02:59:27 632.152253  
556/01/14 13:32:58 650.856145  
557/02/14 01:33:18 662.439798

558/03/17 08:16:19 663.925123  
559/04/18 04:47:42 654.920415  
560/05/20 02:36:54 637.736031  
561/06/23 14:44:17 617.220431  
562/07/29 12:19:50 600.163088  
563/09/04 06:52:34 592.990472  
564/10/09 19:42:51 598.650074  
565/11/14 01:45:57 614.724782  
566/12/17 18:36:16 635.045139  
568/01/18 23:54:24 652.827599  
569/02/18 11:02:11 663.008231  
570/03/21 19:28:31 662.947362  
571/04/22 18:10:29 652.743123  
572/05/24 22:20:59 635.040097  
573/06/28 13:40:20 614.927397  
574/08/03 15:09:17 599.068815  
575/09/09 09:27:13 593.541448  
576/10/14 17:20:01 600.572694  
577/11/18 20:09:12 617.277917  
578/12/22 06:12:19 637.368565  
580/01/23 10:32:31 654.309326  
581/02/22 19:39:48 663.301022  
582/03/26 06:00:36 662.040257  
583/04/27 08:11:21 650.791095  
584/05/29 16:07:24 632.487794  
585/07/03 12:40:28 612.451997  
586/08/08 17:52:33 597.564188  
587/09/14 11:31:04 593.560134  
588/10/19 18:40:07 602.097926  
589/11/23 14:43:02 619.729946

590/12/26 22:02:11 640.005895  
592/01/27 20:33:26 656.497885  
593/02/27 05:30:55 664.524002  
594/03/30 14:30:38 661.929312  
595/05/01 19:24:43 649.310410  
596/06/03 06:50:54 629.928123  
597/07/08 09:09:52 609.596783  
598/08/13 17:31:55 595.411438  
599/09/19 14:49:43 593.013371  
600/10/24 18:11:12 603.391836  
601/11/28 11:29:14 622.281738  
602/12/31 12:22:36 642.796732  
604/02/01 09:15:36 658.477977  
605/03/03 15:01:10 665.052059  
606/04/04 03:12:29 660.830098  
607/05/06 10:11:38 646.831666  
608/06/08 04:27:52 626.779100  
609/07/13 10:43:35 606.807988  
610/08/19 00:33:47 594.148941  
611/09/24 19:23:59 593.911452  
612/10/29 19:14:59 606.073261  
613/12/03 05:19:52 625.688991  
615/01/05 01:19:46 645.699666  
616/02/05 17:51:19 660.033815  
617/03/08 01:02:48 664.841399  
618/04/08 13:43:53 658.937811  
619/05/11 03:43:31 643.788948  
620/06/13 01:51:03 623.515999  
621/07/18 15:34:14 604.480457  
622/08/24 05:43:43 593.638926

623/09/29 23:36:47 595.343818  
624/11/03 18:03:10 608.857284  
625/12/07 21:39:01 628.756827  
627/01/09 13:17:05 648.112931  
628/02/10 03:47:46 661.110016  
629/03/12 10:16:26 664.351605  
630/04/13 03:34:37 657.029939  
631/05/15 19:56:13 641.081273  
632/06/18 01:24:35 620.896814  
633/07/23 16:56:58 602.889425  
634/08/29 09:08:19 593.667257  
635/10/05 00:20:23 596.975243  
636/11/08 12:39:09 611.385732  
637/12/12 12:24:25 631.313074  
639/01/13 23:11:59 649.928231  
640/02/14 12:57:03 661.785728  
641/03/16 20:28:32 663.746961  
642/04/17 15:25:02 655.325656  
643/05/20 13:43:41 638.612693  
644/06/22 22:12:56 618.318171  
645/07/28 18:59:44 601.019423  
646/09/03 12:39:09 593.238954  
647/10/10 00:46:11 598.113176  
648/11/13 10:37:04 613.641185  
649/12/17 03:34:17 633.909035  
651/01/18 12:09:37 652.218954  
652/02/18 22:00:17 663.259975  
653/03/21 05:40:55 664.064983  
654/04/22 02:13:07 654.310965  
655/05/25 02:49:23 636.484617

656/06/27 16:45:33 615.613100  
657/08/02 18:05:07 598.683627  
658/09/08 13:15:30 592.182619  
659/10/15 02:38:55 598.813173  
660/11/18 06:46:59 615.795250  
661/12/21 20:54:51 636.646633  
663/01/22 23:34:37 654.499120  
664/02/23 09:27:52 664.281957  
665/03/25 16:07:25 663.469866  
666/04/26 16:22:03 652.242341  
667/05/29 21:42:25 633.448051  
668/07/02 17:42:01 612.589384  
669/08/07 22:22:50 596.798083  
670/09/13 20:16:31 592.329943  
671/10/20 04:00:26 600.997749  
672/11/23 03:35:09 619.108380  
673/12/26 10:07:31 639.874959  
675/01/27 10:24:46 656.599607  
676/02/27 16:57:41 664.691669  
677/03/30 03:21:01 662.090224  
678/05/01 06:12:52 649.430111  
679/06/03 18:42:15 630.061473  
680/07/07 19:11:52 609.744074  
681/08/13 05:24:28 595.590077  
682/09/19 00:39:30 593.197406  
683/10/25 05:20:25 603.496128  
684/11/27 21:55:55 622.279692  
685/12/30 23:38:49 642.638401  
687/01/31 19:41:14 658.207223  
688/03/03 03:30:06 664.718605

689/04/03 13:46:00 660.570566  
690/05/05 22:55:38 646.828268  
691/06/08 14:40:43 627.205280  
692/07/12 21:51:07 607.648749  
693/08/18 08:03:37 595.055402  
694/09/24 03:04:09 594.396888  
695/10/30 02:32:15 605.931167  
696/12/02 13:11:08 625.000554  
698/01/04 10:59:49 644.817567  
699/02/05 05:01:53 659.263372  
700/03/07 11:49:41 664.491243  
701/04/08 02:15:49 659.129509  
702/05/10 13:09:37 644.514586  
703/06/13 11:50:15 624.577137  
704/07/17 21:25:34 605.501671  
705/08/23 11:33:07 594.156083  
706/09/29 05:18:58 595.121968  
707/11/04 00:19:32 607.929106  
708/12/07 07:27:59 627.551596  
710/01/08 23:36:34 647.167667  
711/02/09 15:33:08 660.941662  
712/03/11 21:34:18 665.108227  
713/04/12 11:33:14 658.539248  
714/05/15 02:45:05 642.777708  
715/06/18 03:40:30 622.133223  
716/07/22 19:06:41 603.100487  
717/08/28 11:58:05 592.745247  
718/10/04 05:13:12 595.273272  
719/11/08 23:03:27 609.615673  
720/12/11 23:45:34 630.097895

722/01/13 13:42:08 649.619868  
723/02/14 01:33:20 662.382571  
724/03/16 07:59:39 665.058287  
725/04/17 00:30:56 656.912635  
726/05/19 19:09:22 639.998468  
727/06/23 02:34:16 618.989712  
728/07/27 22:50:54 600.734960  
729/09/02 17:08:45 592.149877  
730/10/09 09:52:24 596.830660  
731/11/13 20:06:06 612.694683  
732/12/16 16:28:20 633.501952  
734/01/17 23:18:48 652.215220  
735/02/18 10:54:51 663.426021  
736/03/20 16:36:25 664.250638  
737/04/21 13:16:24 654.489708  
738/05/24 13:16:48 636.612936  
739/06/28 03:18:30 615.751874  
740/08/02 03:23:22 598.812182  
741/09/08 00:20:33 592.319880  
742/10/14 11:39:22 598.923333  
743/11/18 17:32:00 615.813721  
744/12/21 06:14:44 636.569540  
746/01/22 10:51:38 654.302421  
747/02/22 18:58:32 664.006644  
748/03/25 03:50:04 663.210485  
749/04/26 02:35:04 652.115948  
750/05/29 09:00:11 633.667091  
751/07/03 02:44:06 613.229431  
752/08/07 07:57:08 597.683262  
753/09/13 02:27:26 593.012446



754/10/19 11:12:58 601.105754  
755/11/23 10:26:57 618.639383  
756/12/25 18:58:05 639.048935  
758/01/26 19:26:57 655.788929  
759/02/27 04:41:00 664.170003  
760/03/29 13:09:35 662.077817  
761/04/30 17:25:25 649.982425  
762/06/03 02:29:18 631.042286  
763/07/08 03:06:19 610.854615  
764/08/12 09:20:33 596.375747  
765/09/18 05:34:38 593.276573  
766/10/24 10:41:24 602.823252  
767/11/28 05:00:21 621.089139  
768/12/30 09:12:45 641.476126  
770/01/31 06:45:10 657.590883  
771/03/03 13:28:01 665.041639  
772/04/02 23:59:06 661.814279  
773/05/05 04:13:08 648.613124  
774/06/07 19:02:14 628.864410  
775/07/12 21:33:44 608.512189  
776/08/17 09:03:03 594.704674  
777/09/23 05:44:37 592.992066  
778/10/29 08:16:05 604.040396  
779/12/02 23:48:27 623.373401  
781/01/03 22:33:11 643.951822  
782/02/04 17:47:40 659.386589  
783/03/07 23:40:26 665.476790  
784/04/07 10:36:43 660.699731  
785/05/09 20:12:39 646.160967  
786/06/12 14:21:35 625.770611

787/07/18 00:05:52 605.771634  
788/08/22 14:10:11 593.437770  
789/09/28 09:36:34 593.818452  
790/11/03 09:07:20 606.708788  
791/12/07 16:19:44 626.808928  
793/01/08 11:12:34 646.962820  
794/02/09 01:37:29 661.036784  
795/03/12 07:57:54 665.330188  
796/04/11 21:33:55 658.754238  
797/05/14 11:20:24 642.968809  
798/06/17 12:58:14 622.265309  
799/07/23 03:44:17 603.225191  
800/08/27 19:53:12 592.830565  
801/10/03 14:54:16 595.347366  
802/11/08 06:44:15 609.645469  
803/12/12 09:39:53 630.051379  
805/01/12 21:38:39 649.492666  
806/02/13 11:38:19 662.183396  
807/03/16 16:47:06 664.817442  
808/04/16 10:08:59 656.755029  
809/05/19 04:30:28 640.041613  
810/06/22 11:37:45 619.429358  
811/07/28 06:01:42 601.501446  
812/09/02 00:37:13 592.924723  
813/10/08 14:25:26 597.178346  
814/11/13 02:40:35 612.433089  
815/12/16 22:23:09 632.798451  
817/01/17 08:19:19 651.372446  
818/02/17 18:59:07 662.772750  
819/03/21 03:08:35 664.040544

820/04/20 21:48:10 654.832347  
821/05/23 21:51:41 637.482514  
822/06/27 08:42:06 616.880503  
823/08/02 08:32:01 599.810882  
824/09/07 02:13:46 592.731286  
825/10/13 15:36:50 598.528451  
826/11/17 22:04:51 614.775089  
827/12/21 13:51:53 635.274081  
829/01/21 19:14:58 653.332482  
830/02/22 05:42:51 663.826374  
831/03/25 11:43:07 664.042966  
832/04/25 10:11:50 653.775689  
833/05/28 11:19:03 635.576927  
834/07/02 03:56:41 614.664780  
835/08/07 05:16:10 598.023963  
836/09/12 02:28:33 592.082174  
837/10/18 13:36:20 599.341043  
838/11/22 16:45:17 616.725409  
839/12/26 04:34:12 637.687899  
841/01/26 06:37:39 655.334306  
842/02/26 14:32:54 664.719226  
843/03/29 22:59:19 663.417678  
844/04/29 22:13:35 651.726120  
845/06/02 06:26:05 632.625763  
846/07/07 02:29:53 611.717439  
847/08/12 09:59:04 596.168429  
848/09/17 07:00:48 592.186730  
849/10/23 14:37:07 601.438257  
850/11/27 12:39:26 620.028902  
851/12/30 17:04:00 640.967652

853/01/30 15:44:37 657.566291  
854/03/02 22:15:15 665.230057  
855/04/03 07:08:45 662.085134  
856/05/04 12:28:52 648.851468  
857/06/07 00:49:37 629.044268  
858/07/12 04:56:18 608.616704  
859/08/17 15:25:47 594.771400  
860/09/22 11:51:43 593.005263  
861/10/28 16:06:34 604.046499  
862/12/02 05:59:28 623.335152  
864/01/04 06:42:38 643.874165  
865/02/04 00:23:20 659.245763  
866/03/07 07:11:59 665.306626  
867/04/07 18:22:09 660.523087  
868/05/09 02:57:57 646.120940  
869/06/11 22:02:01 625.988678  
870/07/17 06:21:28 606.367790  
871/08/22 18:53:01 594.190677  
872/09/27 14:46:49 594.341512  
873/11/02 12:01:19 606.684474  
874/12/06 22:00:06 626.258678  
876/01/08 16:02:25 646.151974  
877/02/08 09:39:06 660.295084  
878/03/11 15:11:48 664.920039  
879/04/12 05:34:48 658.892494  
880/05/13 18:18:04 643.649222  
881/06/16 18:10:52 623.358622  
882/07/22 06:21:35 604.345491  
883/08/27 22:17:27 593.538399  
884/10/02 14:50:49 595.291942

885/11/07 09:51:47 608.821543  
886/12/11 13:13:43 628.781679  
888/01/13 05:13:31 648.259343  
889/02/12 18:30:25 661.538652  
890/03/16 01:39:01 665.139366  
891/04/16 15:46:17 658.065210  
892/05/18 08:12:32 641.986605  
893/06/21 10:41:49 621.267568  
894/07/27 03:58:13 602.512178  
895/09/01 19:59:17 592.647126  
896/10/07 13:56:25 595.741097  
897/11/12 04:36:34 610.478990  
898/12/16 04:49:57 631.033942  
900/01/17 16:00:02 650.384136  
901/02/17 04:54:35 662.779754  
902/03/20 09:55:39 665.005182  
903/04/21 04:16:09 656.474569  
904/05/22 23:10:30 639.285330  
905/06/26 08:56:46 618.247231  
906/08/01 04:57:17 600.211911  
907/09/07 01:11:08 592.028730  
908/10/12 15:54:17 597.188203  
909/11/17 01:32:19 613.451224  
910/12/20 19:34:24 634.456256  
912/01/22 01:58:14 653.074775  
913/02/21 11:18:12 663.968490  
914/03/24 18:29:17 664.325914  
915/04/25 14:07:35 654.072474  
916/05/27 16:48:29 635.798860  
917/07/01 06:55:58 614.775292

918/08/06 10:18:54 598.030854  
919/09/12 06:32:46 592.039156  
920/10/17 18:08:01 599.267369  
921/11/21 22:33:01 616.677986  
922/12/25 09:19:10 637.624117  
924/01/26 12:08:07 655.274824  
925/02/25 20:04:22 664.611719  
926/03/29 03:26:54 663.300125  
927/04/30 04:24:54 651.637165  
928/06/01 10:26:53 632.697161  
929/07/06 08:01:15 612.072013  
930/08/11 13:22:14 596.809310  
931/09/17 09:20:20 592.772237  
932/10/22 17:40:13 601.627498  
933/11/26 14:17:55 619.678515  
934/12/29 21:39:06 640.256390  
936/01/30 19:57:23 656.780264  
937/03/02 04:11:34 664.694165  
938/04/02 13:35:38 661.989391  
939/05/04 17:21:59 649.334536  
940/06/06 05:33:50 629.996998  
941/07/11 06:42:16 609.790723  
942/08/16 15:19:10 595.696859  
943/09/22 11:54:17 593.290149  
944/10/27 14:47:10 603.524424  
945/12/01 08:34:50 622.199573  
947/01/03 09:27:54 642.539279  
948/02/04 06:59:43 658.242287  
949/03/06 12:57:32 665.093954  
950/04/07 00:06:33 661.367234

951/05/09 06:13:14 647.835853  
952/06/10 21:32:49 628.034099  
953/07/16 02:16:25 607.912751  
954/08/21 14:08:11 594.612690  
955/09/27 08:56:53 593.439942  
956/11/01 11:23:25 604.884548  
957/12/05 23:19:20 624.300694  
959/01/07 22:21:03 644.685840  
960/02/08 15:26:09 659.748990  
961/03/10 22:40:56 665.405089  
962/04/11 09:43:49 660.236041  
963/05/13 20:30:07 645.484112  
964/06/15 16:05:01 625.059800  
965/07/21 03:05:45 605.317544  
966/08/26 16:32:25 593.378281  
967/10/02 12:52:31 594.162785  
968/11/06 09:17:12 607.394528  
969/12/10 16:22:40 627.652596  
971/01/12 08:33:11 647.743888  
972/02/12 23:42:46 661.548856  
973/03/15 04:16:11 665.431302  
974/04/15 19:41:10 658.425346  
975/05/18 09:30:22 642.265903  
976/06/20 13:21:04 621.401697  
977/07/26 04:33:40 602.476652  
978/08/31 23:00:37 592.500166  
979/10/07 16:09:52 595.577065  
980/11/11 07:58:23 610.345948  
981/12/15 08:26:30 630.985712  
983/01/16 19:51:35 650.364062

984/02/17 07:33:38 662.783179  
 985/03/19 14:04:51 664.969366  
 986/04/20 06:13:43 656.414642  
 987/05/23 03:13:45 639.265358  
 988/06/25 10:32:16 618.390497  
 989/07/31 08:17:56 600.617463  
 990/09/06 02:14:32 592.576753  
 991/10/12 16:46:31 597.501467  
 992/11/16 03:09:17 613.322454  
 993/12/19 20:58:00 633.887091  
 995/01/21 05:05:48 652.339091  
 996/02/21 15:27:57 663.328798  
 997/03/23 22:09:13 664.059842  
 998/04/24 19:23:49 654.313140  
 999/05/27 18:53:50 636.574083  
 1000/06/30 09:19:09 615.875176

## 2ND MILLENNIUM CE

This is a list of perigees of Jupiter in the 2nd millennium CE.

DATA	TDT	DISTANCE
		min
		km
1001/08/05 09:08:02		599.102597
1002/09/11 04:15:24		592.609948
1003/10/17 16:35:47		599.089865



1004/11/20 20:44:51 615.778133  
1005/12/24 11:24:59 636.340915  
1007/01/25 14:50:04 654.050475  
1008/02/26 00:53:34 663.969611  
1009/03/28 08:24:59 663.588464  
1010/04/29 06:43:23 652.960118  
1011/06/01 11:07:10 634.666186  
1012/07/05 03:40:25 613.982791  
1013/08/10 06:48:45 597.847983  
1014/09/16 03:06:31 592.521926  
1015/10/22 11:46:17 600.206345  
1016/11/25 14:05:11 617.723842  
1017/12/28 22:52:34 638.476714  
1019/01/30 01:29:20 655.731413  
1020/03/01 08:46:26 664.631226  
1021/04/01 17:55:00 662.921025  
1022/05/03 19:18:48 650.961426  
1023/06/06 03:41:55 631.851168  
1024/07/10 01:54:55 611.181342  
1025/08/15 09:41:34 596.105319  
1026/09/21 05:12:13 592.560787  
1027/10/27 12:43:05 602.132546  
1028/11/30 07:25:39 620.868135  
1030/01/02 12:12:02 641.730647  
1031/02/03 08:22:36 658.072976  
1032/03/05 15:57:19 665.368228  
1033/04/06 00:41:44 661.782007  
1034/05/08 06:53:02 648.215163  
1035/06/10 20:53:21 628.208147  
1036/07/15 02:31:16 607.861454

1037/08/20 13:13:12 594.367360  
1038/09/26 11:05:10 593.130292  
1039/11/01 12:37:24 604.653505  
1040/12/05 02:22:43 624.198498  
1042/01/07 00:07:21 644.722825  
1043/02/07 18:33:19 659.845595  
1044/03/09 23:14:37 665.502455  
1045/04/10 12:00:41 660.271411  
1046/05/12 20:53:32 645.443047  
1047/06/15 18:00:15 625.046852  
1048/07/20 03:03:46 605.454994  
1049/08/25 18:20:10 593.720136  
1050/10/01 12:29:23 594.510116  
1051/11/06 09:47:27 607.422795  
1052/12/09 17:02:42 627.296362  
1054/01/11 10:26:16 647.103147  
1055/02/12 01:26:31 660.914161  
1056/03/14 08:22:26 665.030016  
1057/04/14 21:44:31 658.453270  
1058/05/17 13:07:15 642.809283  
1059/06/20 13:17:32 622.353964  
1060/07/25 04:48:31 603.550626  
1061/08/30 19:45:33 593.296048  
1062/10/06 13:02:58 595.709191  
1063/11/11 05:55:49 609.764511  
1064/12/14 07:22:01 629.863168  
1066/01/15 21:30:30 649.108608  
1067/02/16 11:01:11 661.819567  
1068/03/18 17:04:48 664.769879  
1069/04/19 10:17:09 657.202210

1070/05/22 02:48:10 640.937671  
1071/06/25 08:46:45 620.381762  
1072/07/30 01:22:54 602.136733  
1073/09/04 18:33:29 592.952702  
1074/10/11 10:17:20 596.622037  
1075/11/15 22:19:25 611.582306  
1076/12/18 21:19:34 632.002216  
1078/01/20 06:53:28 650.906008  
1079/02/20 19:30:14 662.784326  
1080/03/23 02:11:00 664.493980  
1081/04/23 20:33:02 655.619762  
1082/05/26 18:44:44 638.346409  
1083/06/30 04:17:27 617.535706  
1084/08/04 02:38:10 599.982011  
1085/09/09 21:47:30 592.381680  
1086/10/16 10:27:49 597.915517  
1087/11/20 19:26:44 614.351935  
1088/12/23 10:23:25 635.291087  
1090/01/24 16:58:25 653.664579  
1091/02/25 01:24:08 664.160914  
1092/03/27 08:40:28 664.088170  
1093/04/28 06:07:55 653.435547  
1094/05/31 08:58:43 634.948918  
1095/07/05 01:48:01 613.926893  
1096/08/09 05:51:36 597.514352  
1097/09/15 01:57:29 592.038004  
1098/10/21 13:54:17 599.787854  
1099/11/25 15:00:49 617.521898  
1100/12/28 01:59:17 638.507065  
1102/01/29 02:07:32 655.928468

1103/03/01 10:40:26 664.894774  
1104/03/31 17:36:25 663.109986  
1105/05/02 19:26:41 651.024064  
1106/06/05 03:16:11 631.765574  
1107/07/10 02:18:29 611.098516  
1108/08/14 08:50:08 596.158427  
1109/09/20 06:27:45 592.761894  
1110/10/26 12:06:42 602.251016  
1111/11/30 08:40:56 620.681876  
1113/01/01 12:34:29 641.276219  
1114/02/02 11:15:42 657.499795  
1115/03/05 17:20:45 664.918214  
1116/04/05 04:17:21 661.654602  
1117/05/07 08:33:42 648.512649  
1118/06/09 22:57:21 628.951120  
1119/07/15 01:11:56 608.831812  
1120/08/19 12:17:10 595.239694  
1121/09/25 07:07:43 593.536666  
1122/10/31 10:06:38 604.371714  
1123/12/05 00:36:40 623.348326  
1125/01/06 00:46:56 643.549171  
1126/02/06 19:51:55 658.764838  
1127/03/10 03:25:17 664.915525  
1128/04/09 14:03:22 660.539041  
1129/05/11 23:36:26 646.659774  
1130/06/14 15:41:45 626.885560  
1131/07/19 23:31:35 607.213276  
1132/08/24 10:14:45 594.648475  
1133/09/30 05:16:12 594.202993  
1134/11/05 04:28:15 606.084175

1135/12/09 14:26:57 625.477766  
1137/01/10 11:21:37 645.485465  
1138/02/11 04:41:08 659.953681  
1139/03/14 11:01:25 665.010908  
1140/04/14 01:11:54 659.342437  
1141/05/16 12:05:48 644.362312  
1142/06/19 11:22:46 624.069834  
1143/07/24 21:59:16 604.794059  
1144/08/29 13:04:40 593.532362  
1145/10/05 07:15:50 594.900848  
1146/11/10 01:36:20 608.372145  
1147/12/14 07:08:11 628.640316  
1149/01/14 21:32:28 648.481851  
1150/02/15 12:00:05 661.900365  
1151/03/18 17:27:15 665.295575  
1152/04/18 08:10:50 657.838705  
1153/05/21 01:18:20 641.359154  
1154/06/24 04:55:38 620.427463  
1155/07/29 23:20:08 601.740463  
1156/09/03 17:47:39 592.305053  
1157/10/10 10:08:17 595.965475  
1158/11/15 01:19:35 611.181174  
1159/12/18 22:49:40 631.947275  
1161/01/19 10:01:36 651.157344  
1162/02/19 20:21:31 663.186418  
1163/03/23 02:38:13 664.905971  
1164/04/22 20:27:02 655.845562  
1165/05/25 17:27:34 638.338106  
1166/06/29 03:58:51 617.307259  
1167/08/04 02:42:39 599.755705

1168/09/08 21:27:10 592.303144  
1169/10/15 12:30:19 597.956535  
1170/11/19 19:41:41 614.290094  
1171/12/23 13:07:48 635.009456  
1173/01/23 18:08:10 653.228625  
1174/02/24 04:57:01 663.744685  
1175/03/27 10:59:56 663.859606  
1176/04/27 09:04:25 653.556285  
1177/05/30 11:05:20 635.440971  
1178/07/04 02:56:11 614.737311  
1179/08/09 04:21:52 598.353805  
1180/09/14 01:11:14 592.599172  
1181/10/20 10:47:57 599.808806  
1182/11/24 14:27:39 616.954045  
1183/12/28 01:17:59 637.552550  
1185/01/28 04:52:09 654.865252  
1186/02/28 12:42:30 664.097201  
1187/03/31 22:08:20 662.952980  
1188/05/01 21:41:43 651.725566  
1189/06/04 04:45:22 633.270651  
1190/07/08 23:12:27 612.867713  
1191/08/14 04:41:51 597.455508  
1192/09/18 22:54:21 593.019284  
1193/10/25 07:08:46 601.378539  
1194/11/29 05:27:14 619.121539  
1196/01/01 13:06:19 639.608677  
1197/02/01 12:59:11 656.287679  
1198/03/04 21:59:16 664.484444  
1199/04/05 06:27:55 662.120464  
1200/05/06 11:08:45 649.740458

1201/06/08 20:52:11 630.556537  
1202/07/13 22:17:31 610.254581  
1203/08/19 05:23:22 595.885409  
1204/09/24 01:56:53 593.118217  
1205/10/30 06:18:27 603.174981  
1206/12/03 23:14:13 622.012674  
1208/01/06 01:37:17 642.721430  
1209/02/05 21:40:31 658.649802  
1210/03/09 03:29:32 665.437393  
1211/04/09 14:35:27 661.312521  
1212/05/10 20:26:42 647.295226  
1213/06/13 13:55:31 627.098616  
1214/07/18 19:42:38 606.882388  
1215/08/24 09:28:40 593.864506  
1216/09/29 06:05:46 593.314359  
1217/11/04 06:33:17 605.402763  
1218/12/08 18:49:44 625.248130  
1220/01/10 14:29:19 645.691061  
1221/02/10 07:40:45 660.477466  
1222/03/13 13:01:55 665.613812  
1223/04/14 00:37:59 659.829277  
1224/05/15 12:37:19 644.522243  
1225/06/18 09:54:54 623.868941  
1226/07/23 22:45:29 604.346800  
1227/08/29 14:23:19 593.142493  
1228/10/04 08:53:22 594.705349  
1229/11/09 05:22:35 608.306057  
1230/12/13 09:19:32 628.497435  
1232/01/15 01:52:56 648.219585  
1233/02/14 15:10:39 661.570368

1234/03/17 21:24:53 665.074617  
1235/04/18 12:28:02 657.821850  
1236/05/20 04:11:11 641.660199  
1237/06/23 08:05:14 621.011016  
1238/07/29 00:42:06 602.481936  
1239/09/03 17:19:12 592.907720  
1240/10/09 10:50:57 596.198862  
1241/11/14 00:19:44 610.906698  
1242/12/18 00:59:20 631.244509  
1244/01/19 11:25:16 650.242265  
1245/02/19 00:58:44 662.343601  
1246/03/22 06:38:32 664.449597  
1247/04/23 00:54:45 656.108116  
1248/05/24 20:39:43 639.383419  
1249/06/28 04:44:47 618.900137  
1250/08/02 23:46:11 601.218986  
1251/09/08 18:13:56 593.001664  
1252/10/14 07:13:07 597.595176  
1253/11/18 18:11:45 613.067017  
1254/12/22 12:34:55 633.466023  
1256/01/23 21:54:16 651.886893  
1257/02/23 08:11:59 663.011499  
1258/03/26 16:29:56 663.948525  
1259/04/27 12:02:35 654.417646  
1260/05/29 12:59:45 636.843976  
1261/07/03 00:54:24 616.183877  
1262/08/08 01:45:27 599.279228  
1263/09/13 19:47:18 592.577492  
1264/10/19 08:31:07 598.870326  
1265/11/23 13:31:08 615.636135



1266/12/27 03:31:37 636.514320  
1268/01/28 06:53:07 654.550417  
1269/02/27 16:17:35 664.510980  
1270/03/30 22:14:38 663.821939  
1271/05/01 22:01:47 652.604504  
1272/06/03 01:51:31 633.739546  
1273/07/07 21:59:50 612.712422  
1274/08/13 02:25:57 596.673505  
1275/09/19 00:51:09 591.907263  
1276/10/24 10:36:26 600.404099  
1277/11/28 10:37:23 618.589674  
1278/12/31 18:48:23 639.677008  
1280/02/01 18:24:50 656.814155  
1281/03/04 00:53:16 665.271084  
1282/04/04 09:35:44 662.872152  
1283/05/06 10:48:30 650.192064  
1284/06/07 22:17:01 630.532045  
1285/07/12 21:56:15 609.781836  
1286/08/18 08:15:31 595.217053  
1287/09/24 05:25:47 592.617795  
1288/10/29 10:34:20 602.935901  
1289/12/03 05:05:06 621.922428  
1291/01/05 06:36:13 642.589264  
1292/02/06 03:18:15 658.476181  
1293/03/08 09:31:22 665.257850  
1294/04/08 19:10:11 661.265290  
1295/05/11 02:36:28 647.442461  
1296/06/12 17:30:56 627.493315  
1297/07/18 00:14:36 607.445991  
1298/08/23 12:01:07 594.438843

1299/09/29 07:47:10 593.647562  
1300/11/03 09:40:13 605.363327  
1301/12/07 20:42:36 624.797906  
1303/01/09 19:12:51 644.980865  
1304/02/10 12:05:13 659.687248  
1305/03/12 18:53:58 665.034247  
1306/04/13 07:11:24 659.726382  
1307/05/15 17:25:15 645.139724  
1308/06/17 14:17:04 625.119339  
1309/07/22 23:35:15 605.817852  
1310/08/28 12:37:40 594.130957  
1311/10/04 07:44:32 594.794979  
1312/11/08 03:19:33 607.487195  
1313/12/12 11:39:51 627.159838  
1315/01/14 04:29:50 646.874772  
1316/02/14 21:26:03 660.655039  
1317/03/17 03:04:25 664.836913  
1318/04/17 18:11:38 658.362999  
1319/05/20 08:21:28 642.790582  
1320/06/22 09:40:58 622.402740  
1321/07/27 23:30:23 603.571015  
1322/09/02 16:13:20 593.229223  
1323/10/09 08:23:01 595.590039  
1324/11/13 02:03:25 609.687080  
1325/12/17 03:09:35 630.074167  
1327/01/18 16:55:02 649.673329  
1328/02/19 04:32:02 662.574472  
1329/03/21 10:59:25 665.323273  
1330/04/22 01:55:47 657.181577  
1331/05/24 20:46:08 640.183994

1332/06/27 03:01:50 619.030430  
1333/08/02 00:03:50 600.590342  
1334/09/07 18:38:09 591.804736  
1335/10/14 12:27:27 596.314417  
1336/11/18 00:22:30 612.198821  
1337/12/21 20:58:14 633.236826  
1339/01/23 04:41:53 652.313821  
1340/02/23 15:30:55 663.862361  
1341/03/25 19:55:16 664.931182  
1342/04/26 15:38:38 655.204580  
1343/05/29 13:38:00 637.125936  
1344/07/02 03:27:51 615.866595  
1345/08/07 03:26:37 598.511627  
1346/09/13 01:23:42 591.758522  
1347/10/19 14:36:15 598.362478  
1348/11/22 20:55:01 615.433998  
1349/12/26 11:10:30 636.465891  
1351/01/27 14:56:24 654.486235  
1352/02/27 23:04:45 664.437990  
1353/03/30 06:42:29 663.778374  
1354/05/01 03:59:51 652.675994  
1355/06/03 09:39:52 633.976067  
1356/07/07 02:59:36 613.112041  
1357/08/12 08:41:42 597.137679  
1358/09/18 05:14:49 592.283411  
1359/10/24 14:54:40 600.505204  
1360/11/27 16:01:47 618.377057  
1361/12/30 23:58:01 639.167381  
1363/02/01 01:00:16 656.176637  
1364/03/03 08:36:03 664.657693

1365/04/03 16:33:10 662.565383  
1366/05/05 19:28:04 650.422594  
1367/06/08 03:42:41 631.414551  
1368/07/12 03:19:11 611.077258  
1369/08/17 09:57:41 596.382715  
1370/09/23 05:50:34 593.068061  
1371/10/29 12:24:58 602.528562  
1372/12/02 06:53:49 620.856912  
1374/01/04 12:17:17 641.333999  
1375/02/05 09:22:46 657.449888  
1376/03/07 17:13:52 664.794758  
1377/04/08 03:19:24 661.481761  
1378/05/10 08:23:03 648.317520  
1379/06/12 22:48:24 628.728810  
1380/07/17 02:04:06 608.625918  
1381/08/22 12:14:41 595.022415  
1382/09/28 09:05:57 593.373166  
1383/11/03 10:46:17 604.345713  
1384/12/07 02:13:04 623.565819  
1386/01/09 00:24:13 644.168693  
1387/02/09 19:41:58 659.673955  
1388/03/12 00:16:31 665.781825  
1389/04/12 11:17:37 660.936625  
1390/05/14 19:31:09 646.246154  
1391/06/17 14:18:30 625.658755  
1392/07/21 23:28:49 605.484336  
1393/08/27 15:13:14 593.021308  
1394/10/03 11:26:06 593.326106  
1395/11/08 12:06:29 606.247961  
1396/12/11 20:25:29 626.566163

1398/01/13 15:30:28 647.036195  
1399/02/14 05:23:36 661.442622  
1400/03/16 11:11:34 665.954697  
1401/04/16 22:47:20 659.427864  
1402/05/19 11:58:47 643.461285  
1403/06/22 11:56:07 622.380895  
1404/07/27 03:45:30 602.895893  
1405/09/01 20:24:47 592.223451  
1406/10/08 16:50:50 594.740287  
1407/11/13 10:27:22 609.266333  
1408/12/16 13:25:19 629.963670  
1410/01/18 01:54:09 649.698960  
1411/02/18 15:06:44 662.597428  
1412/03/20 19:13:10 665.338423  
1413/04/21 11:48:01 657.245149  
1414/05/24 04:35:53 640.323469  
1415/06/27 12:08:18 619.295614  
1416/08/01 06:42:01 600.941757  
1417/09/07 02:52:18 592.137337  
1418/10/13 18:56:31 596.513218  
1419/11/18 07:29:26 612.143850  
1420/12/21 04:22:07 632.943503  
1422/01/22 13:11:44 651.823317  
1423/02/22 23:30:23 663.334023  
1424/03/25 06:20:50 664.522215  
1425/04/26 00:01:20 655.163555  
1426/05/28 23:33:58 637.649554  
1427/07/02 09:44:56 616.907445  
1428/08/06 09:47:57 599.683036  
1429/09/12 04:25:20 592.499836

1430/10/18 17:41:33 598.309770  
1431/11/23 01:38:12 614.690508  
1432/12/25 16:48:27 635.344284  
1434/01/26 22:53:29 653.450808  
1435/02/27 08:28:31 663.792123  
1436/03/29 15:11:43 663.752270  
1437/04/30 13:40:47 653.284141  
1438/06/02 15:36:08 635.055784  
1439/07/07 08:52:12 614.286700  
1440/08/11 11:03:23 597.948525  
1441/09/17 07:28:17 592.306881  
1442/10/23 19:04:29 599.742370  
1443/11/27 20:47:52 617.171999  
1444/12/30 08:30:24 638.147236  
1446/01/31 09:08:42 655.839987  
1447/03/03 16:56:18 665.195359  
1448/04/02 23:43:26 663.741035  
1449/05/04 23:01:51 651.790535  
1450/06/07 06:35:53 632.363026  
1451/07/12 03:48:10 611.194638  
1452/08/16 11:49:23 595.525150  
1453/09/22 11:08:19 591.573750  
1454/10/28 19:28:26 600.986365  
1455/12/02 18:44:51 619.840406  
1457/01/03 23:09:43 641.116998  
1458/02/04 21:41:57 658.026452  
1459/03/08 02:31:42 665.898719  
1460/04/07 10:59:07 662.772516  
1461/05/09 14:03:11 649.347949  
1462/06/12 02:25:26 629.147883

1463/07/17 05:58:26 608.223937  
1464/08/21 18:24:48 594.029532  
1465/09/27 15:57:01 592.265576  
1466/11/02 21:49:11 603.595149  
1467/12/07 12:26:23 623.291185  
1469/01/08 12:53:47 644.172298  
1470/02/09 05:57:19 659.767494  
1471/03/12 12:08:02 665.879943  
1472/04/11 21:25:51 661.015196  
1473/05/14 06:01:38 646.370013  
1474/06/16 23:53:20 625.823298  
1475/07/22 09:44:39 605.736683  
1476/08/26 23:23:57 593.293396  
1477/10/02 21:22:03 593.530627  
1478/11/07 20:17:23 606.312584  
1479/12/12 06:10:06 626.415452  
1481/01/13 00:18:00 646.715391  
1482/02/13 16:25:07 661.010664  
1483/03/16 20:39:24 665.542273  
1484/04/16 10:28:46 659.228050  
1485/05/18 21:45:47 643.680151  
1486/06/21 22:20:50 623.137323  
1487/07/27 10:37:59 603.969950  
1488/09/01 03:35:37 593.129662  
1489/10/07 21:23:38 595.026176  
1490/11/12 16:15:32 608.814926  
1491/12/16 20:19:45 629.048183  
1493/01/17 11:01:52 648.670138  
1494/02/18 00:26:50 661.850010  
1495/03/21 06:56:11 665.091408

1496/04/20 21:07:06 657.610802  
1497/05/23 14:46:23 641.223646  
1498/06/26 18:08:16 620.436019  
1499/08/01 12:53:13 601.894438  
1500/09/06 06:10:37 592.472573  
1501/10/12 23:26:44 596.017299  
1502/11/17 14:16:09 611.069528  
1503/12/21 12:35:40 631.768885  
1505/01/21 23:24:51 651.172554  
1506/02/22 10:02:33 663.524817  
1507/03/25 14:27:32 665.545324  
1508/04/25 07:45:34 656.630665  
1509/05/28 02:28:23 638.984292  
1510/07/01 12:57:43 617.518464  
1511/08/06 11:05:13 599.272965  
1512/09/11 08:32:42 591.160768  
1513/10/18 01:48:09 596.611108  
1514/11/22 11:41:50 613.270342  
1515/12/26 06:28:41 634.681103  
1517/01/26 11:27:19 653.655299  
1518/02/26 20:34:57 664.752075  
1519/03/30 01:30:04 665.101216  
1520/04/29 20:21:33 654.630209  
1521/06/01 21:45:25 635.917693  
1522/07/06 12:32:31 614.344368  
1523/08/11 16:24:32 597.159883  
1524/09/16 15:29:46 591.108826  
1525/10/23 04:08:39 598.682895  
1526/11/27 09:42:26 616.612560  
1527/12/30 20:05:29 638.030273



1529/01/30 22:34:11 655.946324  
1530/03/03 04:29:03 665.343279  
1531/04/03 11:27:14 663.887143  
1532/05/04 10:38:08 651.905950  
1533/06/06 17:04:14 632.508137  
1534/07/11 14:33:37 611.354085  
1535/08/16 22:50:00 595.736990  
1536/09/21 20:20:28 591.760132  
1537/10/28 06:37:58 601.089564  
1538/12/02 03:57:50 619.808776  
1540/01/04 10:34:45 640.917117  
1541/02/04 07:28:27 657.705470  
1542/03/07 14:41:10 665.538170  
1543/04/07 22:01:14 662.482767  
1544/05/09 01:54:05 649.360813  
1545/06/11 13:13:47 629.606140  
1546/07/16 16:13:52 609.125127  
1547/08/22 01:27:22 594.995823  
1548/09/26 23:42:53 592.804399  
1549/11/02 03:34:59 603.459672  
1550/12/06 20:39:35 622.577732  
1552/01/08 21:19:35 643.225951  
1553/02/08 17:32:38 658.934642  
1554/03/11 22:26:24 665.457375  
1555/04/12 09:44:35 661.157991  
1556/05/13 15:48:18 647.062958  
1557/06/16 09:24:15 626.896168  
1558/07/21 15:30:04 606.784783  
1559/08/27 05:48:25 593.881928  
1560/10/02 01:43:53 593.358013

1561/11/07 03:05:20 605.412182  
1562/12/11 14:41:05 625.221563  
1564/01/13 11:08:31 645.761684  
1565/02/13 02:59:32 660.830095  
1566/03/16 08:15:10 666.265419  
1567/04/16 17:59:03 660.647123  
1568/05/18 04:39:31 645.284666  
1569/06/21 00:29:42 624.258392  
1570/07/26 13:43:47 604.106901  
1571/09/01 05:46:31 592.178066  
1572/10/07 03:42:27 593.336392  
1573/11/12 02:26:12 607.107937  
1574/12/16 08:39:46 627.905100  
1576/01/18 01:06:24 648.428369  
1577/02/17 14:06:59 662.477083  
1578/03/20 17:36:22 666.373925  
1579/04/21 07:08:12 659.119146  
1580/05/22 20:02:21 642.493416  
1581/06/25 23:47:18 620.997247  
1582/07/31 16:30:35 601.523092  
1583/09/16 12:38:00 591.353735  
1584/10/22 08:49:07 594.754766  
1585/11/27 00:50:21 610.166695  
1586/12/31 02:02:58 631.421693  
1588/02/01 11:41:19 651.186404  
1589/03/03 22:47:22 663.708850  
1590/04/04 02:57:42 665.731705  
1591/05/05 18:38:19 656.801935  
1592/06/06 14:36:10 639.124527  
1593/07/10 23:04:07 617.661403

1594/08/15 22:05:41 599.409096  
1595/09/21 19:28:56 591.318815  
1596/10/27 11:21:42 596.712644  
1597/12/01 23:18:40 613.292216  
1599/01/04 16:11:40 634.581026  
1600/02/05 23:24:59 653.440295  
1601/03/08 07:17:29 664.450844  
1602/04/08 13:10:57 664.826551  
1603/05/10 08:26:48 654.493860  
1604/06/11 08:48:48 636.153508  
1605/07/15 23:20:12 615.007244  
1606/08/21 01:58:47 598.093742  
1607/09/26 22:16:35 591.828587  
1608/11/01 12:12:09 598.817222  
1609/12/06 16:14:21 616.137151  
1611/01/09 05:55:24 637.181441  
1612/02/10 07:48:41 655.078124  
1613/03/12 16:44:21 664.778723  
1614/04/12 22:33:18 663.811433  
1615/05/14 21:58:45 652.412938  
1616/06/16 02:35:41 633.459732  
1617/07/20 22:39:25 612.468622  
1618/08/26 03:46:58 596.544913  
1619/10/02 02:31:59 591.896065  
1620/11/06 11:40:31 600.450523  
1621/12/11 12:32:39 618.652008  
1623/01/13 19:52:22 639.777321  
1624/02/14 19:51:42 657.118957  
1625/03/17 00:56:15 665.867678  
1626/04/17 08:41:24 663.699504

1627/05/19 08:19:00 651.059109  
1628/06/20 17:59:35 631.167968  
1629/07/25 17:07:03 609.865452  
1630/08/31 04:17:38 594.576770  
1631/10/07 02:52:52 591.372156  
1632/11/11 11:42:18 601.593214  
1633/12/16 07:42:57 621.031159  
1635/01/18 10:59:37 642.451601  
1636/02/19 06:32:33 659.127816  
1637/03/21 11:49:27 666.479353  
1638/04/21 18:41:58 662.682760  
1639/05/24 00:04:20 648.624834  
1640/06/25 13:00:37 627.963231  
1641/07/30 20:04:18 606.942032  
1642/09/05 09:06:08 593.082836  
1643/10/12 08:47:42 592.030386  
1644/11/16 12:54:47 604.220284  
1645/12/21 01:56:37 624.530007  
1647/01/22 23:43:56 645.605864  
1648/02/23 15:34:55 660.948386  
1649/03/25 19:18:42 666.497474  
1650/04/26 06:15:04 660.862797  
1651/05/28 14:21:13 645.466768  
1652/06/30 12:00:13 624.402267  
1653/08/04 22:56:00 604.228120  
1654/09/10 16:19:00 592.275565  
1655/10/17 14:11:00 593.427896  
1656/11/21 11:56:02 607.130778  
1657/12/25 19:49:55 627.864767  
1659/01/27 10:59:30 648.279208

1660/02/28 01:02:22 662.262379  
1661/03/30 04:53:15 666.115639  
1662/04/30 17:32:12 658.941604  
1663/06/02 08:06:03 642.538649  
1664/07/05 09:27:58 621.452090  
1665/08/10 02:21:09 602.316479  
1666/09/15 20:48:16 592.179789  
1667/10/22 14:49:02 595.133188  
1668/11/26 08:48:46 609.933352  
1669/12/30 08:59:04 630.715298  
1671/01/31 21:57:48 650.329403  
1672/03/03 08:40:36 663.017192  
1673/04/03 14:13:24 665.485378  
1674/05/05 05:47:13 657.089368  
1675/06/06 23:52:57 639.951757  
1676/07/10 07:18:09 618.765409  
1677/08/15 04:12:32 600.411555  
1678/09/20 23:20:07 591.755519  
1679/10/27 17:16:52 596.366724  
1680/12/01 04:42:47 612.284763  
1682/01/04 01:49:15 633.332695  
1683/02/05 08:52:05 652.504276  
1684/03/07 19:25:34 664.318835  
1685/04/07 22:51:33 665.663036  
1686/05/09 16:39:41 656.110256  
1687/06/11 13:35:12 637.965983  
1688/07/15 01:23:57 616.328923  
1689/08/20 01:31:36 598.309150  
1690/09/26 00:51:29 590.836569  
1691/11/01 15:56:26 597.033011

1692/12/06 01:33:43 614.276891  
1694/01/08 16:45:24 635.918923  
1695/02/09 21:38:16 654.731228  
1696/03/12 04:07:11 665.402120  
1697/04/12 09:59:11 665.183003  
1698/05/14 04:57:00 654.097698  
1699/06/16 07:57:44 634.953911  
1700/07/21 00:21:51 613.202556  
1701/08/26 07:06:15 596.235947  
1702/10/02 05:38:51 590.746622  
1703/11/07 19:12:07 599.061977  
1704/12/11 21:53:05 617.634227  
1706/01/14 07:08:48 639.323522  
1707/02/15 06:31:12 657.123387  
1708/03/17 12:51:44 666.074481  
1709/04/17 17:52:19 663.962366  
1710/05/19 19:04:25 651.293158  
1711/06/22 02:17:08 631.338339  
1712/07/26 03:10:08 609.982127  
1713/08/31 12:09:29 594.648666  
1714/10/07 12:24:25 591.406148  
1715/11/12 21:00:53 601.613076  
1716/12/16 16:48:10 620.992233  
1718/01/18 20:43:35 642.373477  
1719/02/19 16:18:56 658.964130  
1720/03/21 20:48:30 666.291036  
1721/04/22 05:31:37 662.498582  
1722/05/24 08:50:32 648.569697  
1723/06/26 23:46:06 628.209346  
1724/07/31 03:50:00 607.568583

1725/09/05 17:10:14 593.881175  
1726/10/12 15:14:59 592.609734  
1727/11/17 18:14:39 604.220549  
1728/12/21 09:23:05 624.004958  
1730/01/23 06:56:59 644.789546  
1731/02/24 01:00:21 660.191573  
1732/03/26 05:36:37 666.059345  
1733/04/26 15:32:32 660.958013  
1734/05/29 00:33:50 646.101825  
1735/07/01 18:43:50 625.459032  
1736/08/05 05:01:35 605.332096  
1737/09/10 20:13:14 593.000006  
1738/10/17 16:47:05 593.400011  
1739/11/22 17:21:46 606.346811  
1740/12/26 01:21:59 626.629251  
1742/01/27 20:39:06 647.104600  
1743/02/28 10:23:58 661.668846  
1744/03/30 15:02:29 666.500070  
1745/05/01 02:06:37 660.263878  
1746/06/02 12:51:58 644.434333  
1747/07/06 11:48:54 623.199639  
1748/08/10 01:41:57 603.211974  
1749/09/15 19:11:08 591.785705  
1750/10/22 17:12:51 593.642335  
1751/11/27 12:53:32 607.968115  
1752/12/30 18:44:12 629.021833  
1754/02/01 07:54:49 649.437601  
1755/03/04 21:13:28 663.131311  
1756/04/03 23:55:21 666.515660  
1757/05/05 13:47:26 658.742712

1758/06/07 04:32:46 641.692722  
1759/07/11 09:14:47 620.041094  
1760/08/15 03:48:25 600.687779  
1761/09/21 01:29:27 590.972549  
1762/10/27 19:59:22 594.984054  
1763/12/02 12:08:47 610.968684  
1765/01/04 09:47:47 632.554061  
1766/02/05 19:21:09 652.287317  
1767/03/09 03:47:17 664.464343  
1768/04/08 08:33:45 665.960599  
1769/05/10 00:02:09 656.401422  
1770/06/11 21:38:25 638.205669  
1771/07/16 07:46:28 616.465896  
1772/08/20 09:34:16 598.362468  
1773/09/26 07:01:37 590.828287  
1774/11/02 00:08:37 596.988980  
1775/12/07 09:08:04 614.232708  
1777/01/09 01:07:55 635.843043  
1778/02/10 05:05:39 654.642236  
1779/03/13 13:11:44 665.265752  
1780/04/12 17:00:21 665.039571  
1781/05/14 14:03:40 654.008955  
1782/06/16 15:00:53 635.039697  
1783/07/21 08:53:24 613.622070  
1784/08/25 12:23:10 596.932890  
1785/10/01 11:33:13 591.396755  
1786/11/06 23:52:07 599.295724  
1787/12/12 02:40:22 617.287615  
1789/01/13 13:25:13 638.612979  
1790/02/14 14:00:10 656.315537



1791/03/17 20:25:52 665.506451  
1792/04/17 03:29:58 663.844128  
1793/05/19 02:08:21 651.733624  
1794/06/21 10:17:02 632.270051  
1795/07/26 06:54:34 611.143389  
1796/08/30 15:42:33 595.581498  
1797/10/06 14:05:19 591.719119  
1798/11/11 22:38:02 601.107924  
1799/12/16 21:32:16 619.881996  
1801/01/19 02:19:21 641.065570  
1802/02/20 00:41:28 658.015569  
1803/03/23 05:53:43 666.149618  
1804/04/22 12:44:08 663.408006  
1805/05/24 15:13:41 650.306992  
1806/06/27 00:46:33 630.217869  
1807/08/01 03:13:10 609.041097  
1808/09/05 13:57:29 594.198927  
1809/10/12 12:40:37 591.608945  
1810/11/17 20:28:52 602.375121  
1811/12/22 13:32:58 622.043958  
1813/01/23 16:06:23 643.400673  
1814/02/24 09:59:23 659.734655  
1815/03/27 15:09:36 666.641364  
1816/04/26 23:10:48 662.362162  
1817/05/29 04:18:36 647.937754  
1818/07/01 20:22:07 627.113908  
1819/08/06 03:27:09 606.228834  
1820/09/10 17:53:55 592.738837  
1821/10/17 17:50:06 592.213217  
1822/11/22 19:17:19 604.880202

1823/12/27 08:02:43 625.502890  
1825/01/28 02:43:32 646.594204  
1826/02/28 18:48:53 661.676777  
1827/03/31 21:22:59 666.771169  
1828/05/01 08:28:05 660.627138  
1829/06/02 18:17:16 644.726833  
1830/07/06 16:41:27 623.394528  
1831/08/11 05:53:12 603.254063  
1832/09/16 01:02:00 591.726589  
1833/10/22 21:37:26 593.535282  
1834/11/27 19:45:47 607.857649  
1836/01/01 00:14:30 628.947339  
1837/02/01 15:11:03 649.375467  
1838/03/05 02:24:18 663.065613  
1839/04/05 06:58:57 666.438492  
1840/05/05 19:03:59 658.659817  
1841/06/07 10:57:24 641.699328  
1842/07/11 14:17:58 620.250843  
1843/08/16 09:42:34 601.204868  
1844/09/21 04:22:11 591.606580  
1845/10/28 00:02:48 595.362333  
1846/12/02 14:59:45 610.852251  
1848/01/05 14:12:11 631.966124  
1849/02/05 23:53:52 651.519073  
1850/03/09 10:55:44 663.787940  
1851/04/09 14:20:13 665.658276  
1852/05/10 07:44:55 656.632317  
1853/06/12 02:25:09 638.960560  
1854/07/16 12:44:41 617.587512  
1855/08/21 10:12:26 599.453505

1856/09/26 08:00:16 591.425373  
1857/11/01 23:59:19 596.831461  
1858/12/07 10:26:48 613.324476  
1860/01/10 04:53:01 634.559270  
1861/02/10 10:55:12 653.434554  
1862/03/13 19:28:06 664.671656  
1863/04/14 00:53:19 665.413873  
1864/05/14 18:02:21 655.398907  
1865/06/16 18:08:25 637.046565  
1866/07/21 06:07:49 615.514728  
1867/08/26 08:49:50 597.914256  
1868/10/01 06:26:09 591.054071  
1869/11/06 20:54:24 597.780009  
1870/12/12 04:29:38 615.280637  
1872/01/14 17:33:16 636.834121  
1873/02/14 21:22:19 655.335347  
1874/03/18 04:22:28 665.530485  
1875/04/18 09:22:31 664.872065  
1876/05/19 07:06:03 653.438082  
1877/06/21 09:49:41 634.144410  
1878/07/26 05:16:56 612.529708  
1879/08/31 11:11:44 595.943457  
1880/10/06 10:20:32 590.916016  
1881/11/11 22:47:50 599.669903  
1882/12/16 22:52:49 618.498408  
1884/01/19 07:40:29 640.233026  
1885/02/19 05:10:43 657.803714  
1886/03/22 11:09:10 666.376482  
1887/04/22 17:13:21 663.791108  
1888/05/23 17:47:17 650.691515

1889/06/26 04:01:20 630.449573  
1890/07/31 05:11:23 609.102788  
1891/09/05 16:13:36 594.070240  
1892/10/11 16:50:32 591.404278  
1893/11/16 23:22:21 602.179377  
1894/12/21 18:58:28 621.917537  
1896/01/23 19:37:06 643.359221  
1897/02/23 15:23:53 659.745317  
1898/03/26 18:39:47 666.641998  
1899/04/27 03:16:57 662.361376  
1900/05/29 08:10:44 647.912328  
1901/07/01 23:50:33 627.188789  
1902/08/06 06:24:41 606.508594  
1903/09/11 21:21:30 593.236977  
1904/10/17 18:45:14 592.654218  
1905/11/22 22:05:52 604.945891  
1906/12/27 09:34:40 625.113346  
1908/01/29 06:59:59 645.906820  
1909/02/28 21:59:46 660.981765  
1910/04/01 03:19:32 666.333508  
1911/05/02 12:54:23 660.638164  
1912/06/02 23:07:33 645.287168  
1913/07/06 19:12:49 624.375792  
1914/08/11 07:43:02 604.393933  
1915/09/16 22:59:36 592.558498  
1916/10/22 20:55:14 593.689914  
1917/11/27 18:24:49 607.257526  
1919/01/01 01:41:41 627.777321  
1920/02/02 17:42:52 648.088361  
1921/03/05 08:11:42 662.116420

1922/04/05 11:23:33 666.294211  
1923/05/07 00:40:38 659.563945  
1924/06/07 12:11:46 643.467071  
1925/07/11 13:46:35 622.317634  
1926/08/16 03:35:10 602.734760  
1927/09/21 22:35:32 591.931949  
1928/10/27 17:55:06 594.380453  
1929/12/02 12:33:29 608.997491  
1931/01/05 15:39:58 630.005582  
1932/02/07 04:26:17 650.075275  
1933/03/09 16:02:59 663.289130  
1934/04/09 20:55:07 666.184910  
1935/05/11 10:18:00 658.043695  
1936/06/12 04:02:40 640.836322  
1937/07/16 08:45:59 619.308592  
1938/08/21 05:53:21 600.365142  
1939/09/27 01:43:02 591.160996  
1940/11/01 19:54:55 595.587236  
1941/12/07 10:07:30 611.827245  
1943/01/10 05:59:13 633.417558  
1944/02/11 14:12:42 652.974453  
1945/03/13 22:54:09 664.774952  
1946/04/14 02:39:39 665.837934  
1947/05/15 20:29:50 655.864860  
1948/06/16 17:36:09 637.378366  
1949/07/21 07:16:15 615.595386  
1950/08/26 08:35:02 597.759046  
1951/10/02 07:26:44 590.718446  
1952/11/06 23:49:41 597.455298  
1953/12/12 06:28:58 615.063102

1955/01/14 21:44:47 636.781357  
1956/02/15 23:47:58 655.399375  
1957/03/18 07:18:53 665.663430  
1958/04/18 11:55:06 664.967463  
1959/05/20 08:14:09 653.487268  
1960/06/21 12:13:13 634.135413  
1961/07/26 06:19:02 612.610933  
1962/08/31 12:33:28 596.195478  
1963/10/07 12:10:47 591.278013  
1964/11/11 22:41:58 599.846562  
1965/12/17 01:09:43 618.291041  
1967/01/19 08:33:19 639.687326  
1968/02/20 08:57:14 657.149614  
1969/03/22 14:01:08 665.848683  
1970/04/22 21:13:50 663.638415  
1971/05/24 21:27:00 651.013305  
1972/06/26 06:06:58 631.258118  
1973/07/31 05:39:24 610.163682  
1974/09/05 15:29:35 595.042040  
1975/10/12 13:11:29 591.844072  
1976/11/16 22:05:30 601.887025  
1977/12/21 17:12:47 620.992319  
1979/01/23 21:46:02 642.107168  
1980/02/24 17:22:14 658.612030  
1981/03/26 23:45:38 666.076838  
1982/04/27 06:44:55 662.716866  
1983/05/29 10:54:52 649.279413  
1984/06/30 22:45:03 629.160968  
1985/08/05 02:42:56 608.380490  
1986/09/10 13:10:00 594.186660

1987/10/17 12:19:49 592.280734  
 1988/11/21 16:15:48 603.473779  
 1989/12/26 08:35:08 623.149453  
 1991/01/28 08:04:36 644.183266  
 1992/02/29 02:50:12 659.996202  
 1993/03/31 06:44:42 666.343489  
 1994/05/01 17:20:51 661.629990  
 1995/06/02 23:11:57 646.965904  
 1996/07/05 17:37:25 626.228550  
 1997/08/10 01:09:26 605.733765  
 1998/09/15 17:02:04 592.839482  
 1999/10/22 14:11:04 592.838042  
 2000/11/26 15:11:04 605.775983

# 3RD MILLENNIUM CE

**This is a list of perigees of Jupiter in the 3rd millennium CE.**

DATA	TDT	DISTANCE
		min
		km
2001/12/31	01:08:24	626.436920
2003/02/01	19:15:12	647.332230
2004/03/04	09:21:29	662.069048
2005/04/04	13:42:16	666.704679
2006/05/05	23:48:45	660.130419
2007/06/07	12:20:47	643.925278

2008/07/10 11:03:34 622.478413  
2009/08/15 03:17:51 602.553276  
2010/09/20 21:23:33 591.499177  
2011/10/27 18:45:27 593.867035  
2012/12/01 14:54:48 608.645275  
2014/01/04 17:42:41 629.872225  
2015/02/06 07:10:35 650.183691  
2016/03/08 18:15:57 663.518829  
2017/04/08 21:27:33 666.443475  
2018/05/10 11:57:30 658.204101  
2019/06/12 03:07:56 640.861788  
2020/07/15 10:01:15 619.233330  
2021/08/20 05:30:15 600.365509  
2022/09/26 02:18:13 591.295061  
2023/11/01 21:05:05 595.754456  
2024/12/06 10:04:10 611.761012  
2026/01/09 08:10:04 633.052462  
2027/02/10 15:36:11 652.415500  
2028/03/13 01:49:57 664.262524  
2029/04/13 06:04:05 665.547634  
2030/05/14 22:44:05 655.995229  
2031/06/16 20:38:58 637.949152  
2032/07/20 07:17:31 616.518554  
2033/08/25 07:45:53 598.726406  
2034/10/01 05:35:10 591.367702  
2035/11/06 20:05:26 597.465970  
2036/12/11 05:42:42 614.425619  
2038/01/13 20:35:50 635.696199  
2039/02/15 02:31:46 654.234420  
2040/03/17 09:46:57 664.812571



2041/04/17 15:43:52 664.851949  
2042/05/19 11:20:50 654.318575  
2043/06/21 12:15:25 635.817926  
2044/07/25 03:28:52 614.544559  
2045/08/30 06:48:01 597.613144  
2046/10/06 03:26:41 591.528513  
2047/11/11 17:14:31 598.873746  
2048/12/15 20:39:56 616.559753  
2050/01/18 09:20:26 637.856336  
2051/02/19 10:16:41 655.827281  
2052/03/21 18:33:28 665.400610  
2053/04/21 23:56:26 664.153364  
2054/05/23 23:14:41 652.381706  
2055/06/26 04:27:48 633.033040  
2056/07/30 01:28:21 611.761618  
2057/09/04 07:36:40 595.801478  
2058/10/11 07:15:23 591.450799  
2059/11/16 16:17:58 600.614789  
2060/12/20 15:47:40 619.532473  
2062/01/22 21:15:36 641.115686  
2063/02/23 19:28:28 658.337791  
2064/03/25 23:30:09 666.435356  
2065/04/26 07:28:34 663.375164  
2066/05/28 08:36:24 649.879614  
2067/06/30 20:50:44 629.463061  
2068/08/03 23:04:29 608.227064  
2069/09/09 12:31:15 593.649159  
2070/10/16 11:18:22 591.581326  
2071/11/21 18:04:29 602.883990  
2072/12/25 10:55:21 622.891509

2074/01/27 10:58:54 644.248312  
2075/02/28 04:16:07 660.333899  
2076/03/30 08:58:20 666.768659  
2077/04/30 16:29:48 661.982066  
2078/06/01 23:48:31 647.122297  
2079/07/05 15:55:36 626.130978  
2080/08/09 02:01:53 605.508911  
2081/09/14 16:29:57 592.698555  
2082/10/21 15:16:58 592.817818  
2083/11/26 16:36:27 605.764403  
2084/12/30 02:17:12 626.222563  
2086/01/31 21:36:06 646.943691  
2087/03/04 12:18:30 661.614953  
2088/04/03 15:56:14 666.396081  
2089/05/05 03:54:18 660.100565  
2090/06/06 13:47:07 644.284823  
2091/07/10 13:37:05 623.187778  
2092/08/14 02:21:44 603.435776  
2093/09/19 20:21:12 592.217799  
2094/10/26 17:02:31 594.130750  
2095/12/01 12:29:06 608.298379  
2097/01/03 18:08:32 629.043806  
2098/02/05 07:47:04 649.109842  
2099/03/08 21:09:27 662.578296  
2100/04/09 01:20:48 665.966993  
2101/05/10 14:33:09 658.548370  
2102/06/12 05:52:45 642.088542  
2103/07/16 08:08:56 621.028353  
2104/08/20 01:36:45 602.002858  
2105/09/25 20:01:20 592.080983

2106/11/01 13:38:23 595.327084  
2107/12/07 06:43:07 610.386386  
2109/01/09 05:50:10 631.302331  
2110/02/10 18:04:50 650.908198  
2111/03/14 04:25:28 663.433880  
2112/04/13 09:43:53 665.640058  
2113/05/15 01:34:44 656.951543  
2114/06/16 20:12:23 639.530471  
2115/07/21 04:32:42 618.168878  
2116/08/25 02:15:33 599.842480  
2117/09/30 22:02:26 591.435664  
2118/11/06 15:48:21 596.505234  
2119/12/12 02:03:31 612.991361  
2121/01/13 21:31:05 634.500847  
2122/02/15 02:41:13 653.725622  
2123/03/18 11:54:24 665.055296  
2124/04/17 15:20:48 665.557509  
2125/05/19 10:14:18 655.111503  
2126/06/21 09:32:13 636.309125  
2127/07/26 00:36:31 614.532033  
2128/08/30 03:35:17 597.044322  
2129/10/06 03:51:02 590.645490  
2130/11/11 17:41:31 598.028181  
2131/12/17 00:22:08 616.049032  
2133/01/18 12:04:55 637.819656  
2134/02/19 14:23:04 656.178535  
2135/03/22 19:38:00 665.980945  
2136/04/22 01:45:09 664.739653  
2137/05/23 22:26:13 652.745066  
2138/06/26 04:22:18 633.062958

2139/07/31 00:10:07 611.442126  
2140/09/04 09:12:22 595.380279  
2141/10/11 07:49:16 591.162431  
2142/11/16 19:04:54 600.477027  
2143/12/21 18:17:46 619.420186  
2145/01/23 00:46:17 640.868381  
2146/02/23 22:15:11 658.023291  
2147/03/27 04:13:37 666.155448  
2148/04/26 10:07:15 663.272783  
2149/05/28 13:03:58 650.068473  
2150/06/30 22:32:01 629.962592  
2151/08/05 01:45:25 608.945858  
2152/09/09 11:52:56 594.359413  
2153/10/16 11:16:20 591.982508  
2154/11/21 17:35:18 602.811272  
2155/12/26 10:52:45 622.320381  
2157/01/27 12:43:41 643.381397  
2158/02/28 07:35:05 659.403775  
2159/03/31 12:14:13 666.119475  
2160/04/30 21:50:26 661.912083  
2161/06/02 02:11:58 647.869716  
2162/07/05 18:25:50 627.596041  
2163/08/09 23:18:47 607.179486  
2164/09/14 12:49:46 593.834323  
2165/10/21 10:15:58 592.930742  
2166/11/26 12:03:04 604.820978  
2167/12/31 01:43:26 624.699178  
2169/01/31 22:28:42 645.385081  
2170/03/04 15:58:42 660.548053  
2171/04/04 20:34:48 666.092557

2172/05/05 06:55:32 660.666550  
2173/06/06 16:51:13 645.546953  
2174/07/10 11:59:13 624.770677  
2175/08/14 23:32:26 604.727427  
2176/09/19 15:21:24 592.693728  
2177/10/26 11:41:41 593.546054  
2178/12/01 11:05:44 607.006975  
2180/01/04 17:22:51 627.724712  
2181/02/05 10:40:45 648.366558  
2182/03/08 22:55:22 662.618952  
2183/04/09 02:57:02 666.677009  
2184/05/09 14:52:56 659.489655  
2185/06/11 03:33:28 642.852858  
2186/07/15 05:54:56 621.238010  
2187/08/19 23:06:54 601.549816  
2188/09/24 18:37:20 591.094060  
2189/10/31 16:29:49 594.223844  
2190/12/06 09:41:03 609.582102  
2192/01/09 11:59:05 631.041071  
2193/02/09 22:01:08 651.190806  
2194/03/13 09:19:48 664.104617  
2195/04/13 11:37:31 666.429568  
2196/05/14 02:43:02 657.601591  
2197/06/15 20:20:38 639.776488  
2198/07/20 04:34:46 617.942873  
2199/08/25 02:33:05 599.246531  
2200/10/01 01:27:57 590.835203  
2201/11/06 18:22:57 596.132080  
2202/12/12 07:18:06 612.818657  
2204/01/15 01:30:11 634.375542

2205/02/15 08:39:36 653.539307  
2206/03/18 15:59:57 664.865024  
2207/04/18 21:22:43 665.459222  
2208/05/19 14:31:32 655.177466  
2209/06/21 14:26:46 636.636396  
2210/07/26 03:28:11 615.058152  
2211/08/31 07:10:54 597.653936  
2212/10/06 04:31:49 591.111558  
2213/11/11 19:49:28 598.131011  
2214/12/17 01:53:58 615.749506  
2216/01/19 15:20:51 637.170296  
2217/02/19 17:46:38 655.388361  
2218/03/23 01:46:03 665.272996  
2219/04/23 06:16:27 664.406118  
2220/05/24 04:47:14 653.058115  
2221/06/26 07:29:02 634.103574  
2222/07/31 02:48:15 612.944129  
2223/09/05 07:04:17 596.706839  
2224/10/11 05:52:06 591.691663  
2225/11/16 16:31:00 600.013916  
2226/12/21 17:35:54 618.194811  
2228/01/24 02:51:30 639.421582  
2229/02/24 02:45:20 656.813671  
2230/03/27 08:52:24 665.582635  
2231/04/27 16:38:09 663.474116  
2232/05/28 16:15:13 651.004737  
2233/07/01 01:45:01 631.364407  
2234/08/05 00:00:48 610.314252  
2235/09/10 09:58:57 595.115873  
2236/10/16 08:16:51 591.798336

2237/11/21 15:52:47 601.752991  
2238/12/26 12:52:47 620.984047  
2240/01/28 15:30:28 642.412656  
2241/02/28 11:55:48 659.221187  
2242/03/31 16:07:46 666.702789  
2243/05/01 22:52:48 662.972266  
2244/06/02 03:11:37 648.886849  
2245/07/05 15:49:27 628.135419  
2246/08/09 22:12:55 606.946368  
2247/09/15 12:08:51 592.891602  
2248/10/21 11:56:48 591.621067  
2249/11/26 17:56:51 603.686366  
2250/12/31 07:33:43 624.113267  
2252/02/02 06:34:29 645.480818  
2253/03/04 21:43:08 661.185515  
2254/04/05 01:27:28 667.051749  
2255/05/06 10:19:58 661.582328  
2256/06/06 17:40:33 646.129587  
2257/07/10 13:27:19 624.770175  
2258/08/15 00:41:52 604.165996  
2259/09/20 17:51:53 591.848264  
2260/10/26 17:32:23 592.858409  
2261/12/01 16:17:40 606.646942  
2263/01/05 01:20:28 627.596651  
2264/02/06 16:41:24 648.296730  
2265/03/09 06:55:26 662.546401  
2266/04/09 09:21:56 666.619356  
2267/05/10 21:37:40 659.538040  
2268/06/11 10:04:35 643.033489  
2269/07/15 11:36:33 621.609060

2270/08/20 03:41:27 602.007052  
2271/09/25 23:54:30 591.525365  
2272/10/31 19:17:52 594.439580  
2273/12/06 14:32:18 609.466137  
2275/01/09 15:43:10 630.628786  
2276/02/11 04:31:14 650.567488  
2277/03/13 14:43:29 663.451477  
2278/04/13 19:39:34 665.976425  
2279/05/15 09:24:09 657.579793  
2280/06/16 03:17:20 640.414683  
2281/07/20 08:46:04 619.147347  
2282/08/25 05:48:11 600.591468  
2283/10/01 00:42:19 591.678302  
2284/11/05 19:00:06 596.085361  
2285/12/11 07:48:22 611.966996  
2287/01/14 05:04:57 633.091537  
2288/02/15 13:12:46 652.328218  
2289/03/17 23:46:39 664.091904  
2290/04/18 03:28:28 665.368317  
2291/05/19 21:55:01 655.810755  
2292/06/20 18:20:08 637.808547  
2293/07/25 06:48:05 616.405277  
2294/08/30 06:08:37 598.622189  
2295/10/06 04:40:13 591.257701  
2296/11/10 19:48:58 597.392525  
2297/12/16 04:19:34 614.468326  
2299/01/18 20:09:23 636.041636  
2300/02/20 00:05:50 654.912157  
2301/03/23 06:48:25 665.659978  
2302/04/23 11:38:16 665.449935



2303/05/25 05:52:23 654.299605  
2304/06/26 08:44:34 635.002046  
2305/07/31 00:43:33 613.083853  
2306/09/05 07:45:47 595.948418  
2307/10/12 07:53:34 590.330098  
2308/11/16 21:48:09 598.572218  
2309/12/22 02:24:54 617.232759  
2311/01/24 11:39:42 639.182791  
2312/02/25 11:51:43 657.307661  
2313/03/27 16:43:33 666.556561  
2314/04/27 21:15:07 664.624010  
2315/05/29 20:44:07 651.920901  
2316/07/01 02:53:03 631.729907  
2317/08/05 03:05:53 609.955617  
2318/09/10 13:04:27 594.222932  
2319/10/17 13:39:04 590.811729  
2320/11/22 00:26:13 601.100252  
2321/12/26 20:43:55 620.717528  
2323/01/29 01:31:08 642.378948  
2324/02/29 20:20:09 659.230863  
2325/04/01 01:03:28 666.737645  
2326/05/02 07:49:59 663.022948  
2327/06/03 10:39:58 649.021091  
2328/07/06 00:22:47 628.365230  
2329/08/10 05:01:09 607.291649  
2330/09/15 18:32:13 593.235641  
2331/10/22 19:05:04 591.875009  
2332/11/26 23:04:34 603.715776  
2333/12/31 15:08:50 623.886856  
2335/02/02 12:40:45 645.046685

2336/03/05 06:31:04 660.652603  
2337/04/05 09:29:28 666.565263  
2338/05/06 19:17:24 661.380066  
2339/06/08 02:28:59 646.399998  
2340/07/10 20:46:09 625.649083  
2341/08/15 05:58:15 605.378313  
2342/09/20 22:08:25 592.875020  
2343/10/27 18:44:38 593.184268  
2344/12/01 19:59:08 606.150757  
2346/01/05 04:47:50 626.556488  
2347/02/06 23:59:34 647.128577  
2348/03/09 13:50:40 661.654727  
2349/04/09 19:01:41 666.290706  
2350/05/11 05:29:57 659.871702  
2351/06/12 17:33:44 643.974927  
2352/07/15 16:16:46 622.846861  
2353/08/20 07:16:39 603.104856  
2354/09/26 00:15:52 591.970555  
2355/11/01 22:02:14 594.009206  
2356/12/06 17:34:20 608.368702  
2358/01/09 22:11:08 629.385007  
2359/02/11 11:26:33 649.826541  
2360/03/13 23:41:37 663.537634  
2361/04/14 01:27:29 666.881416  
2362/05/15 15:02:19 658.944733  
2363/06/17 04:44:41 641.648510  
2364/07/20 10:11:52 619.738169  
2365/08/25 05:02:00 600.207954  
2366/10/01 03:58:31 590.421120  
2367/11/07 00:13:08 594.481332

2368/12/11 16:44:46 610.610149  
2370/01/14 15:57:36 632.459072  
2371/02/16 00:37:26 652.508957  
2372/03/18 09:05:30 664.967963  
2373/04/18 12:32:30 666.610884  
2374/05/20 02:30:01 657.025633  
2375/06/21 23:15:01 638.575825  
2376/07/25 08:43:18 616.418106  
2377/08/30 10:55:33 597.864221  
2378/10/06 10:08:18 590.130142  
2379/11/12 04:08:40 596.409676  
2380/12/16 15:02:23 613.958625  
2382/01/19 06:31:45 635.916149  
2383/02/20 11:06:08 654.986009  
2384/03/22 17:37:31 665.755477  
2385/04/22 20:56:39 665.568050  
2386/05/24 16:39:02 654.422752  
2387/06/26 17:02:35 635.170244  
2388/07/30 10:45:31 613.311034  
2389/09/04 15:47:13 596.220872  
2390/10/11 15:57:59 590.548651  
2391/11/17 06:41:28 598.684529  
2392/12/21 09:49:58 617.145112  
2394/01/23 21:15:52 638.919833  
2395/02/24 20:24:21 656.903849  
2396/03/27 02:39:18 666.134885  
2397/04/27 07:52:15 664.312004  
2398/05/29 06:08:38 651.953678  
2399/07/01 13:15:30 632.257801  
2400/08/04 10:39:01 610.962834

2401/09/09 19:07:09 595.282921  
2402/10/16 19:03:55 591.421743  
2403/11/22 03:50:47 600.956609  
2404/12/26 03:18:47 619.937822  
2406/01/28 07:44:26 641.322683  
2407/03/01 06:11:39 658.295683  
2408/03/31 10:26:55 666.213157  
2409/05/01 18:00:38 663.121278  
2410/06/02 20:07:42 649.707297  
2411/07/06 07:33:25 629.482786  
2412/08/09 10:13:56 608.427607  
2413/09/14 22:48:51 593.929544  
2414/10/21 21:13:27 591.763208  
2415/11/27 04:33:18 602.837273  
2416/12/30 20:58:27 622.651349  
2418/02/01 22:23:35 644.048357  
2419/03/05 15:06:38 660.401264  
2420/04/04 19:32:20 667.213726  
2421/05/06 01:56:35 662.701283  
2422/06/07 07:18:11 647.907489  
2423/07/10 22:37:31 626.683116  
2424/08/14 07:41:30 605.496091  
2425/09/19 23:08:13 591.929527  
2426/10/27 00:56:14 591.554902  
2427/12/02 04:08:28 604.510892  
2429/01/04 16:53:25 625.466189  
2430/02/06 11:57:50 646.916466  
2431/03/10 02:57:47 662.270538  
2432/04/09 04:18:43 667.499346  
2433/05/10 14:19:26 661.294443

2434/06/11 22:18:00 645.128204  
2435/07/15 21:01:54 623.331062  
2436/08/19 10:04:36 602.694652  
2437/09/25 06:53:10 590.869792  
2438/11/01 05:45:42 592.794923  
2439/12/07 04:21:06 607.517131  
2441/01/09 10:06:18 629.068177  
2442/02/10 23:53:27 649.839630  
2443/03/14 10:48:52 663.697063  
2444/04/13 13:53:03 667.051005  
2445/05/15 00:51:03 659.106078  
2446/06/16 16:15:54 641.806020  
2447/07/20 19:14:57 619.902877  
2448/08/24 15:57:37 600.392971  
2449/09/30 12:54:35 590.602793  
2450/11/06 09:48:40 594.587334  
2451/12/12 02:59:32 610.616548  
2453/01/14 01:26:09 632.302588  
2454/02/15 11:07:38 652.245958  
2455/03/18 20:01:39 664.613014  
2456/04/17 22:49:12 666.297884  
2457/05/19 14:45:05 656.895842  
2458/06/21 09:06:20 638.833551  
2459/07/25 19:46:49 617.148388  
2460/08/29 18:31:18 598.877342  
2461/10/05 16:45:19 590.907698  
2462/11/11 10:37:12 596.581683  
2463/12/16 20:33:43 613.451321  
2465/01/18 15:15:12 635.010938  
2466/02/19 19:53:21 654.035378

2467/03/23 04:27:58 665.116323  
2468/04/22 08:31:47 665.431361  
2469/05/24 02:35:04 654.899667  
2470/06/26 03:07:33 636.122559  
2471/07/30 17:21:07 614.466673  
2472/09/03 21:11:34 597.097816  
2473/10/10 20:57:18 590.756618  
2474/11/16 10:45:55 598.080413  
2475/12/21 17:57:03 615.998684  
2477/01/23 05:24:52 637.752260  
2478/02/24 07:57:17 656.301049  
2479/03/27 12:43:21 666.411659  
2480/04/26 17:15:04 665.460975  
2481/05/28 13:06:22 653.557807  
2482/06/30 16:41:28 633.712656  
2483/08/04 12:34:01 611.618003  
2484/09/08 21:23:02 594.834317  
2485/10/15 22:02:50 589.982944  
2486/11/21 12:32:52 599.142475  
2487/12/26 13:26:36 618.448523  
2489/01/27 21:50:13 640.615491  
2490/02/28 18:34:00 658.521461  
2491/03/31 23:32:53 667.229336  
2492/05/01 03:17:39 664.581666  
2493/06/02 03:29:09 651.183478  
2494/07/05 12:03:46 630.435905  
2495/08/09 14:33:21 608.516907  
2496/09/14 02:29:30 593.091526  
2497/10/21 05:31:31 590.451162  
2498/11/26 13:55:30 601.690597

2499/12/31 09:35:37 622.009616  
2501/02/02 10:29:22 643.918815  
2502/03/06 04:41:13 660.531589  
2503/04/06 06:35:46 667.426097  
2504/05/06 14:25:52 662.915627  
2505/06/07 17:35:38 648.081754  
2506/07/11 10:02:51 626.838394  
2507/08/15 17:09:03 605.628054  
2508/09/20 10:27:36 592.053756  
2509/10/27 10:27:32 591.653309  
2510/12/02 14:44:35 604.529885  
2512/01/06 03:23:05 625.403906  
2513/02/06 22:58:51 646.732433  
2514/03/10 13:17:30 662.021157  
2515/04/10 16:35:49 667.210245  
2516/05/11 00:48:29 661.095858  
2517/06/12 10:51:11 645.190257  
2518/07/16 06:51:39 623.802883  
2519/08/20 20:50:39 603.549823  
2520/09/25 14:05:43 591.751735  
2521/11/01 12:46:31 593.210475  
2522/12/07 11:43:05 607.304199  
2524/01/10 17:40:17 628.329279  
2525/02/11 09:36:49 648.939544  
2526/03/14 21:44:44 662.946780  
2527/04/15 00:35:47 666.736961  
2528/05/15 13:14:53 659.348596  
2529/06/17 01:25:15 642.593656  
2530/07/21 04:50:59 621.004386  
2531/08/25 21:36:09 601.426205

2532/09/30 18:05:07 591.087741  
2533/11/06 15:20:17 594.298122  
2534/12/12 08:42:23 609.636205  
2536/01/15 11:02:52 631.073530  
2537/02/15 21:01:11 651.318126  
2538/03/19 07:33:21 664.493524  
2539/04/19 09:40:34 667.105312  
2540/05/19 22:20:50 658.452519  
2541/06/21 15:15:05 640.556727  
2542/07/25 21:26:21 618.360643  
2543/08/30 20:01:22 599.015128  
2544/10/05 19:36:08 589.883900  
2545/11/11 15:19:13 594.797397  
2546/12/17 07:05:08 611.654993  
2548/01/20 02:36:58 633.815265  
2549/02/20 10:28:17 653.770950  
2550/03/23 16:53:23 665.772192  
2551/04/23 19:53:01 666.787281  
2552/05/24 11:17:50 656.514625  
2553/06/26 08:12:29 637.507872  
2554/07/30 21:12:27 615.079988  
2555/09/05 01:06:59 596.713912  
2556/10/11 01:22:29 589.557647  
2557/11/16 20:09:47 596.710559  
2558/12/22 03:50:28 615.023792  
2560/01/24 18:36:20 637.346628  
2561/02/24 19:25:35 656.330628  
2562/03/28 01:48:47 666.636277  
2563/04/28 04:08:52 665.711601  
2564/05/29 00:15:11 653.800038



2565/07/01 02:58:36 633.881740  
2566/08/04 23:04:52 611.748607  
2567/09/10 06:28:55 594.917681  
2568/10/16 09:14:08 590.036608  
2569/11/21 22:02:48 599.167208  
2570/12/27 00:32:33 618.410278  
2572/01/29 07:52:17 640.518095  
2573/03/01 06:17:43 658.345146  
2574/04/01 09:21:19 667.011075  
2575/05/02 15:20:34 664.382942  
2576/06/02 13:55:44 651.117790  
2577/07/05 23:35:35 630.698672  
2578/08/09 23:38:05 609.163938  
2579/09/15 12:11:38 593.947170  
2580/10/21 11:55:27 591.068402  
2581/11/26 21:09:03 601.719791  
2582/12/31 17:04:30 621.492543  
2584/02/02 19:31:13 643.075384  
2585/03/05 14:07:15 659.740726  
2586/04/05 18:30:49 666.946837  
2587/05/07 00:31:05 662.949371  
2588/06/07 05:05:28 648.683923  
2589/07/10 17:53:35 627.855042  
2590/08/15 01:05:38 606.736627  
2591/09/20 14:33:38 592.807649  
2592/10/26 15:11:17 591.663521  
2593/12/01 20:32:49 603.793645  
2595/01/05 10:31:28 624.194387  
2596/02/07 08:58:50 645.591184  
2597/03/10 00:27:33 661.464794

2598/04/10 02:46:23 667.611167  
2599/05/11 11:09:12 662.401527  
2600/06/12 16:09:25 647.017160  
2601/07/16 11:04:29 625.452574  
2602/08/20 20:41:10 604.335340  
2603/09/26 15:08:06 591.280204  
2604/11/01 16:04:54 591.686051  
2605/12/07 17:44:36 605.355009  
2607/01/11 04:56:07 626.713979  
2608/02/12 21:26:25 648.129778  
2609/03/15 10:57:53 663.148901  
2610/04/15 12:34:57 667.800539  
2611/05/16 21:45:00 660.973048  
2612/06/17 08:27:11 644.263688  
2613/07/21 07:22:30 622.162048  
2614/08/26 00:13:51 601.592078  
2615/10/01 21:27:02 590.238466  
2616/11/06 20:12:07 592.877046  
2617/12/12 18:26:06 608.351098  
2619/01/15 20:44:14 630.331411  
2620/02/17 09:34:25 651.144227  
2621/03/19 18:19:24 664.651067  
2622/04/19 20:42:21 667.404446  
2623/05/21 08:47:09 658.735985  
2624/06/22 00:16:00 640.800338  
2625/07/26 06:51:38 618.500223  
2626/08/31 05:14:31 599.094624  
2627/10/07 03:55:20 589.893690  
2628/11/12 01:47:32 594.774559  
2629/12/17 15:47:16 611.615178

2631/01/20 13:29:57 633.736933  
2632/02/21 19:25:14 653.654722  
2633/03/24 03:51:47 665.623524  
2634/04/24 05:16:53 666.612872  
2635/05/25 21:38:17 656.417547  
2636/06/26 18:04:02 637.599547  
2637/07/31 06:51:15 615.530306  
2638/09/05 08:36:07 597.451788  
2639/10/12 09:28:18 590.271979  
2640/11/17 01:35:11 596.981662  
2641/12/22 11:08:30 614.705687  
2643/01/25 01:35:00 636.632604  
2644/02/26 05:16:53 655.508163  
2645/03/28 10:39:13 666.034011  
2646/04/28 15:27:01 665.555812  
2647/05/30 09:34:51 654.189261  
2648/07/01 12:21:57 634.786335  
2649/08/05 04:59:25 612.877292  
2650/09/10 12:19:32 595.871809  
2651/10/17 11:51:53 590.379201  
2652/11/22 02:29:28 598.695307  
2653/12/27 06:12:47 617.338445  
2655/01/29 16:08:43 639.239428  
2656/03/01 15:29:11 657.435749  
2657/04/01 20:39:06 666.921411  
2658/05/02 23:44:59 665.299015  
2659/06/03 22:04:54 652.834179  
2660/07/06 02:15:44 632.624457  
2661/08/10 01:16:17 610.535182  
2662/09/15 10:12:20 594.159334

2663/10/22 12:33:05 589.993215  
2664/11/27 00:49:47 599.853697  
2666/01/01 00:10:01 619.565410  
2667/02/03 06:13:18 641.770828  
2668/03/06 02:02:36 659.379515  
2669/04/06 05:12:39 667.606802  
2670/05/07 10:55:50 664.380799  
2671/06/08 10:27:41 650.483767  
2672/07/10 22:14:58 629.440011  
2673/08/15 01:00:41 607.520576  
2674/09/20 15:51:43 592.460015  
2675/10/27 17:59:25 590.430308  
2676/12/02 01:29:18 602.312432  
2678/01/05 19:39:57 623.109328  
2679/02/07 18:03:16 645.108639  
2680/03/10 10:53:37 661.496305  
2681/04/10 12:38:14 667.881521  
2682/05/11 19:16:54 662.750106  
2683/06/13 01:12:56 647.314441  
2684/07/15 17:37:12 625.659799  
2685/08/20 04:37:48 604.405801  
2686/09/25 22:44:06 591.269629  
2687/11/01 23:10:39 591.604063  
2688/12/07 03:01:06 605.268952  
2690/01/10 12:26:19 626.631113  
2691/02/12 07:06:48 648.046893  
2692/03/14 18:57:30 663.045488  
2693/04/14 21:28:40 667.698224  
2694/05/16 06:36:12 660.863401  
2695/06/17 16:27:20 644.277893

2696/07/20 15:59:34 622.408213  
2697/08/25 07:37:28 602.170238  
2698/10/01 03:02:09 590.937993  
2699/11/07 02:40:11 593.318558  
2700/12/12 22:44:49 608.259403  
2702/01/16 03:49:43 629.758541  
2703/02/17 15:52:32 650.352260  
2704/03/20 03:43:25 663.957946  
2705/04/20 05:00:19 667.061483  
2706/05/21 17:59:42 658.927350  
2707/06/23 08:19:20 641.517507  
2708/07/26 13:16:50 619.604304  
2709/08/31 08:43:17 600.177467  
2710/10/07 07:34:24 590.528457  
2711/11/13 03:08:45 594.640640  
2712/12/17 20:12:42 610.737628  
2714/01/20 18:35:48 632.479536  
2715/02/22 04:09:31 652.481512  
2716/03/24 11:49:42 665.081785  
2717/04/24 15:07:37 667.052536  
2718/05/26 04:06:54 657.821745  
2719/06/27 22:43:40 639.596499  
2720/07/31 06:34:32 617.348119  
2721/09/05 07:24:59 598.345848  
2722/10/12 05:54:54 589.834046  
2723/11/18 02:09:30 595.397284  
2724/12/22 14:47:12 612.686058  
2726/01/25 09:19:07 634.897862  
2727/02/26 14:26:00 654.607513  
2728/03/28 21:45:09 666.158506

2729/04/28 23:15:34 666.644998  
2730/05/30 16:58:40 655.919381  
2731/07/02 14:24:15 636.626398  
2732/08/05 05:59:31 614.199438  
2733/09/10 09:43:21 596.139395  
2734/10/17 11:54:32 589.507300  
2735/11/23 04:34:23 597.215814  
2736/12/27 11:03:58 615.947011  
2738/01/29 23:41:02 638.428360  
2739/03/02 23:41:57 657.225407  
2740/04/02 03:59:03 667.141131  
2741/05/03 07:59:45 665.674214  
2742/06/04 03:20:57 653.209345  
2743/07/07 09:01:18 632.899273  
2744/08/10 05:25:48 610.649183  
2745/09/15 16:18:45 594.106504  
2746/10/22 18:17:04 589.862069  
2747/11/28 06:33:56 599.682828  
2749/01/01 07:44:31 619.446776  
2750/02/03 12:32:41 641.689270  
2751/03/07 09:30:41 659.340796  
2752/04/06 12:22:22 667.557659  
2753/05/07 16:56:37 664.341899  
2754/06/08 18:02:30 650.458268  
2755/07/12 03:39:26 629.557118  
2756/08/15 07:38:31 607.880249  
2757/09/20 20:53:07 593.058053  
2758/10/27 21:42:50 590.944644  
2759/12/03 06:24:43 602.418137  
2761/01/05 23:01:55 622.714678

2762/02/08 00:28:24 644.402272  
2763/03/11 16:40:24 660.752207  
2764/04/10 20:10:59 667.413299  
2765/05/12 03:01:22 662.725093  
2766/06/13 07:31:22 647.848494  
2767/07/16 23:35:57 626.640490  
2768/08/20 07:47:17 605.560596  
2769/09/25 23:37:22 592.124753  
2770/11/02 00:48:46 591.797964  
2771/12/08 03:20:09 604.671877  
2773/01/10 16:43:45 625.472172  
2774/02/12 11:31:13 646.761410  
2775/03/16 03:06:11 662.137479  
2776/04/15 04:23:16 667.619174  
2777/05/16 13:27:04 661.842172  
2778/06/17 20:36:13 646.088190  
2779/07/21 16:27:56 624.486782  
2780/08/25 04:04:01 603.647004  
2781/09/30 23:24:29 591.198516  
2782/11/06 22:16:09 592.244218  
2783/12/12 23:38:43 606.335147  
2785/01/15 07:03:26 627.779855  
2786/02/16 23:42:35 648.949420  
2787/03/20 10:56:14 663.525233  
2788/04/19 13:51:36 667.684480  
2789/05/20 23:14:36 660.395978  
2790/06/22 11:39:50 643.429780  
2791/07/26 12:00:00 621.313936  
2792/08/30 06:28:47 601.050577  
2793/10/06 02:52:49 590.194914

2794/11/12 02:18:22 593.336691  
2795/12/17 21:25:53 609.192164  
2797/01/19 23:12:09 631.310000  
2798/02/21 09:17:12 651.992288  
2799/03/24 18:43:51 665.150729  
2800/04/23 19:25:56 667.434467  
2801/05/25 09:33:02 658.275811  
2802/06/27 01:23:06 639.951331  
2803/07/31 10:34:54 617.523435  
2804/09/04 09:15:39 598.293960  
2805/10/11 10:16:27 589.617179  
2806/11/17 06:16:40 595.147489  
2807/12/22 19:30:58 612.471470  
2809/01/24 14:51:14 634.806959  
2810/02/25 19:53:37 654.586002  
2811/03/29 02:19:04 666.198984  
2812/04/28 05:05:45 666.680790  
2813/05/29 20:25:12 655.936365  
2814/07/01 19:54:45 636.667512  
2815/08/05 08:56:26 614.383150  
2816/09/09 14:16:02 596.530975  
2817/10/16 14:40:37 589.997411  
2818/11/22 06:39:38 597.450541  
2819/12/27 14:30:29 615.748040  
2821/01/29 02:32:30 637.841657  
2822/03/02 04:39:10 656.518049  
2823/04/02 09:39:28 666.561775  
2824/05/02 13:05:24 665.490247  
2825/06/03 09:45:38 653.522080  
2826/07/06 12:20:49 633.723444



2827/08/10 08:46:36 611.760530  
2828/09/14 16:24:05 595.129681  
2829/10/21 17:07:25 590.340132  
2830/11/27 06:53:10 599.405138  
2832/01/01 07:34:55 618.486705  
2833/02/02 16:28:34 640.413324  
2834/03/06 13:42:18 658.184210  
2835/04/06 18:41:57 667.031138  
2836/05/06 22:57:44 664.775694  
2837/06/07 21:23:11 651.909235  
2838/07/11 05:06:20 631.602140  
2839/08/15 04:09:28 609.783107  
2840/09/19 14:42:51 593.972800  
2841/10/26 16:38:00 590.505375  
2842/12/02 01:48:12 600.833948  
2844/01/06 00:23:06 620.672465  
2845/02/07 03:12:44 642.644606  
2846/03/10 23:37:23 659.796333  
2847/04/11 01:55:21 667.491081  
2848/05/11 08:28:49 663.816484  
2849/06/12 10:14:54 649.608126  
2850/07/15 22:39:14 628.567182  
2851/08/20 03:25:53 606.928812  
2852/09/24 18:51:22 592.397646  
2853/10/31 19:08:45 590.891773  
2854/12/07 02:33:47 603.126272  
2856/01/10 17:15:31 624.058820  
2857/02/11 15:42:52 645.943477  
2858/03/15 06:00:06 662.004591  
2859/04/15 08:59:17 667.960624

2860/05/15 15:24:14 662.351733  
2861/06/16 22:39:18 646.554906  
2862/07/20 16:54:06 624.726850  
2863/08/25 05:34:59 603.616761  
2864/09/29 23:31:14 590.913862  
2865/11/06 01:21:34 591.855341  
2866/12/12 02:17:14 606.017053  
2868/01/15 11:11:50 627.604079  
2869/02/16 02:59:28 648.957835  
2870/03/19 15:27:31 663.629302  
2871/04/19 15:57:46 667.832380  
2872/05/20 02:54:49 660.512070  
2873/06/21 13:08:53 643.469393  
2874/07/25 15:07:47 621.367786  
2875/08/30 07:24:24 601.222625  
2876/10/05 05:37:44 590.510636  
2877/11/11 03:23:57 593.621320  
2878/12/16 22:54:54 609.140020  
2880/01/20 01:28:10 630.902865  
2881/02/20 12:25:23 651.355042  
2882/03/23 22:02:56 664.557505  
2883/04/24 00:51:24 667.102864  
2884/05/24 12:42:52 658.389725  
2885/06/26 06:00:49 640.558713  
2886/07/30 11:26:41 618.512443  
2887/09/04 10:16:10 599.349338  
2888/10/10 08:15:09 590.332176  
2889/11/16 04:01:27 595.173409  
2890/12/21 19:02:10 611.796340  
2892/01/24 14:59:32 633.648425

2893/02/24 23:04:37 653.365568  
2894/03/28 06:50:50 665.326618  
2895/04/28 09:09:16 666.622644  
2896/05/29 01:10:20 656.883834  
2897/06/30 20:01:48 638.469136  
2898/08/04 07:28:56 616.433889  
2899/09/09 07:45:28 597.996759  
2900/10/16 07:10:47 590.210455  
2901/11/22 01:25:42 596.382311  
2902/12/27 10:48:36 613.869196  
2904/01/30 04:23:40 635.909478  
2905/03/02 07:33:33 655.138506  
2906/04/02 14:54:07 666.131384  
2907/05/03 17:53:57 666.081597  
2908/06/03 11:37:33 654.997652  
2909/07/06 12:34:11 635.620745  
2910/08/10 04:11:31 613.469938  
2911/09/15 09:47:43 595.940595  
2912/10/21 11:15:40 589.945489  
2913/11/27 01:26:09 598.060634  
2915/01/01 07:19:49 616.931062  
2916/02/03 16:35:51 639.308803  
2917/03/06 16:58:54 657.804919  
2918/04/06 20:09:51 667.267926  
2919/05/08 00:24:42 665.356450  
2920/06/07 21:39:56 652.484600  
2921/07/11 03:54:37 631.974278  
2922/08/15 02:48:44 609.790732  
2923/09/20 14:32:54 593.643531  
2924/10/26 15:56:32 589.973806

2925/12/02 04:35:14 600.338596  
2927/01/06 02:15:54 620.388117  
2928/02/08 07:11:31 642.610530  
2929/03/11 01:17:29 659.972946  
2930/04/11 05:06:48 667.766850  
2931/05/12 09:19:45 664.062032  
2932/06/12 11:29:04 649.750800  
2933/07/15 23:01:07 628.556049  
2934/08/20 04:49:28 606.903678  
2935/09/25 18:35:11 592.463476  
2936/10/31 20:59:57 591.045326  
2937/12/07 02:54:44 603.169857  
2939/01/10 19:06:41 623.794002  
2940/02/12 17:10:23 645.454965  
2941/03/15 09:47:20 661.445099  
2942/04/15 11:21:14 667.562384  
2943/05/16 19:54:23 662.307346  
2944/06/17 00:52:51 646.940206  
2945/07/20 19:36:38 625.533291  
2946/08/25 04:39:37 604.615135  
2947/09/30 23:03:58 591.738876  
2948/11/05 22:21:41 592.162996  
2949/12/12 00:20:15 605.630795  
2951/01/15 10:39:12 626.681055  
2952/02/17 04:27:46 647.776360  
2953/03/19 17:51:44 662.610799  
2954/04/19 20:57:57 667.360930  
2955/05/21 05:29:50 660.944097  
2956/06/21 16:05:34 644.853280  
2957/07/25 12:48:48 623.326683

2958/08/30 03:41:20 603.006774  
2959/10/05 21:37:15 591.339581  
2960/11/10 20:11:16 593.132529  
2961/12/16 18:34:38 607.627143  
2963/01/19 23:32:15 628.976362  
2964/02/21 14:26:59 649.725911  
2965/03/24 01:52:20 663.667048  
2966/04/24 04:04:36 667.213641  
2967/05/25 16:24:19 659.448796  
2968/06/26 04:59:12 642.274567  
2969/07/30 09:16:02 620.331518  
2970/09/04 03:10:29 600.601915  
2971/10/11 00:55:16 590.452265  
2972/11/15 22:35:21 594.186569  
2973/12/21 14:55:21 610.250050  
2975/01/24 15:30:35 632.319025  
2976/02/25 23:35:15 652.700970  
2977/03/28 08:35:05 665.418923  
2978/04/28 10:10:26 667.197475  
2979/05/29 23:47:47 657.608004  
2980/06/30 18:56:44 638.987653  
2981/08/04 04:09:53 616.562875  
2982/09/09 05:40:03 597.647732  
2983/10/16 06:40:37 589.550588  
2984/11/21 01:14:49 595.676315  
2985/12/26 14:09:26 613.392199  
2987/01/29 06:14:55 635.779233  
2988/03/01 11:12:54 655.339651  
2989/04/01 16:09:54 666.516039  
2990/05/02 19:07:45 666.515918

2991/06/03 12:03:11 655.288795  
2992/07/05 11:52:43 635.690708  
2993/08/09 04:07:54 613.313170  
2994/09/14 10:24:31 595.763086  
2995/10/21 10:56:24 589.861924  
2996/11/26 03:37:37 598.043780  
2997/12/31 07:52:48 616.794821  
2999/02/02 19:34:17 638.963711